“The CENIC AI Resource Powers Diverse Disciplines”

The Right Connection
CENIC 2026:
March 30, 2024

Dr. Larry Smarr
Founding Director Emeritus, California Institute for Telecommunications and Information Technology;
Distinguished Professor Emeritus, Dept. of Computer Science and Engineering
Jacobs School of Engineering, UC San Diego

NRP NATIONAL RESEARCH PLATFORM

CENICAIR
CENIC ARTIFICIAL INTELLIGENCE RESOURCES

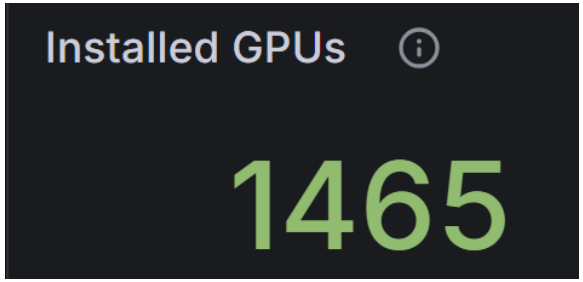
NRP Nautilus

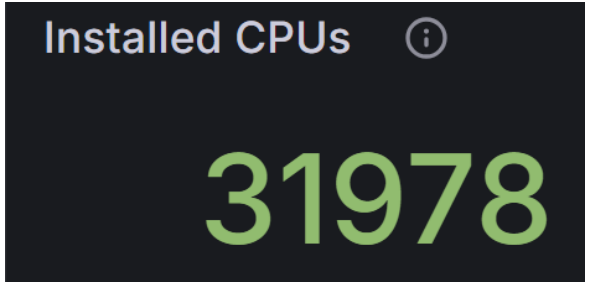
Abstract

CENIC AIR storage and computing resources
are being used to investigate how AI/ML algorithms
can be applied to a wide range of disciplines.
Examples are drawn from the research projects
of several CENIC AIR users
across disciplines as diverse as astrophysics,
climate change, healthcare, finance, precision agriculture,
and conservation genomics.
This session will highlight research use cases from
CSU Dominguez Hills, CSU Fullerton, CSU Northridge,
Cal Poly Humboldt, and Cal Poly San Luis Obispo,
as well as from Caltech, UC San Diego, and UC Riverside.

The National Research Platform (NRP) is a Distributed Academic Cloud with Nodes Hosted on Campuses

Current NRP Capacity Available to Researchers

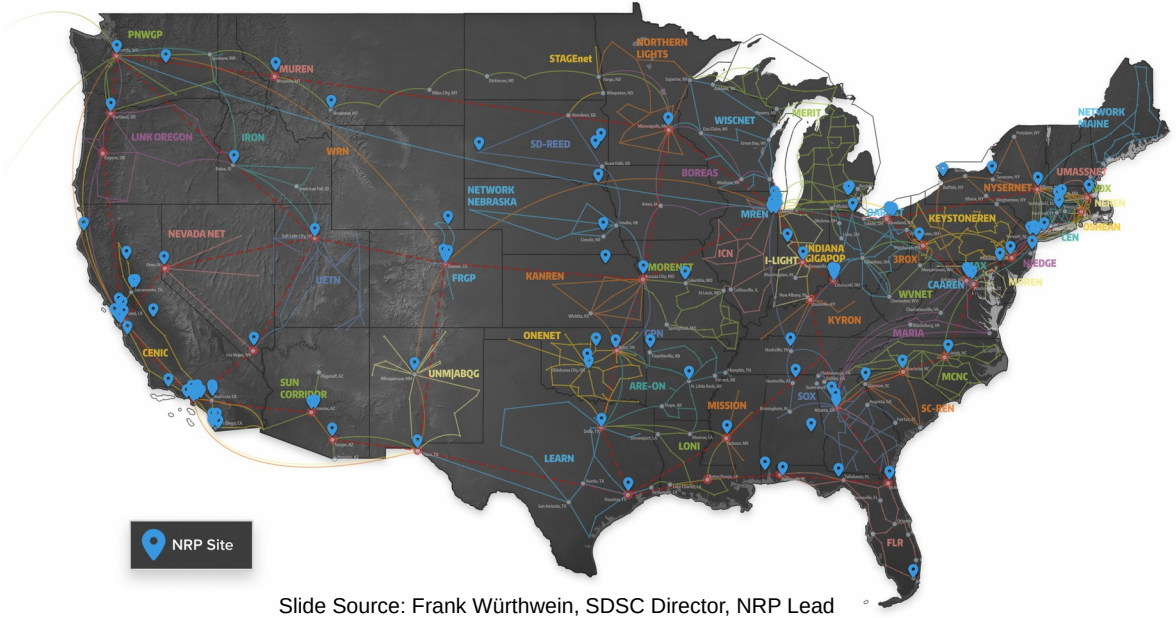




National Research Platform: 82 institutions with 126 data centers

- 36 R1 colleges
- 28 non-R1 colleges
- 13 Research & Education Networks
- Some National and State labs and a Museum

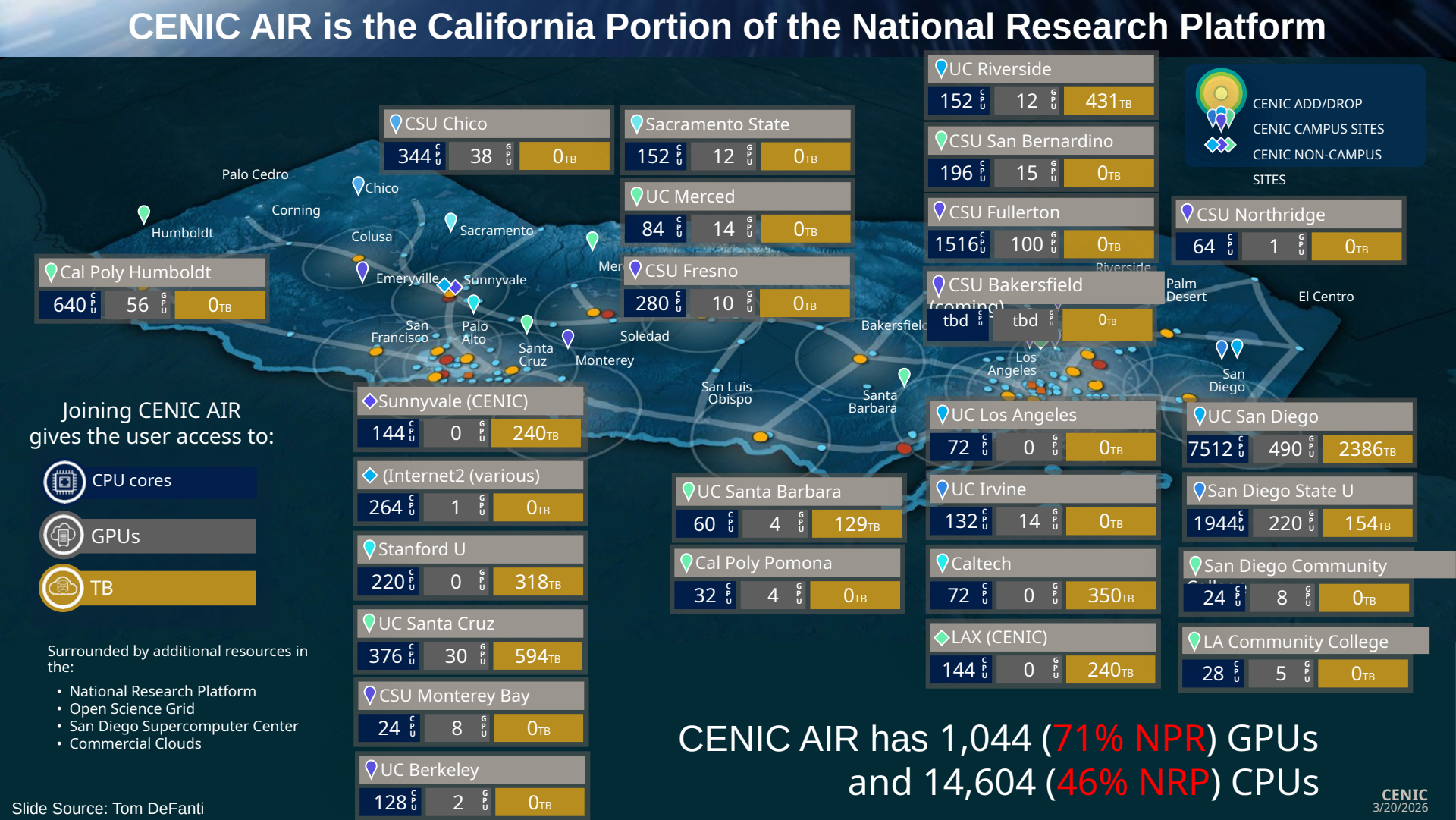
NRP Locations Overlayed on the National Research and Education Internet Backbone



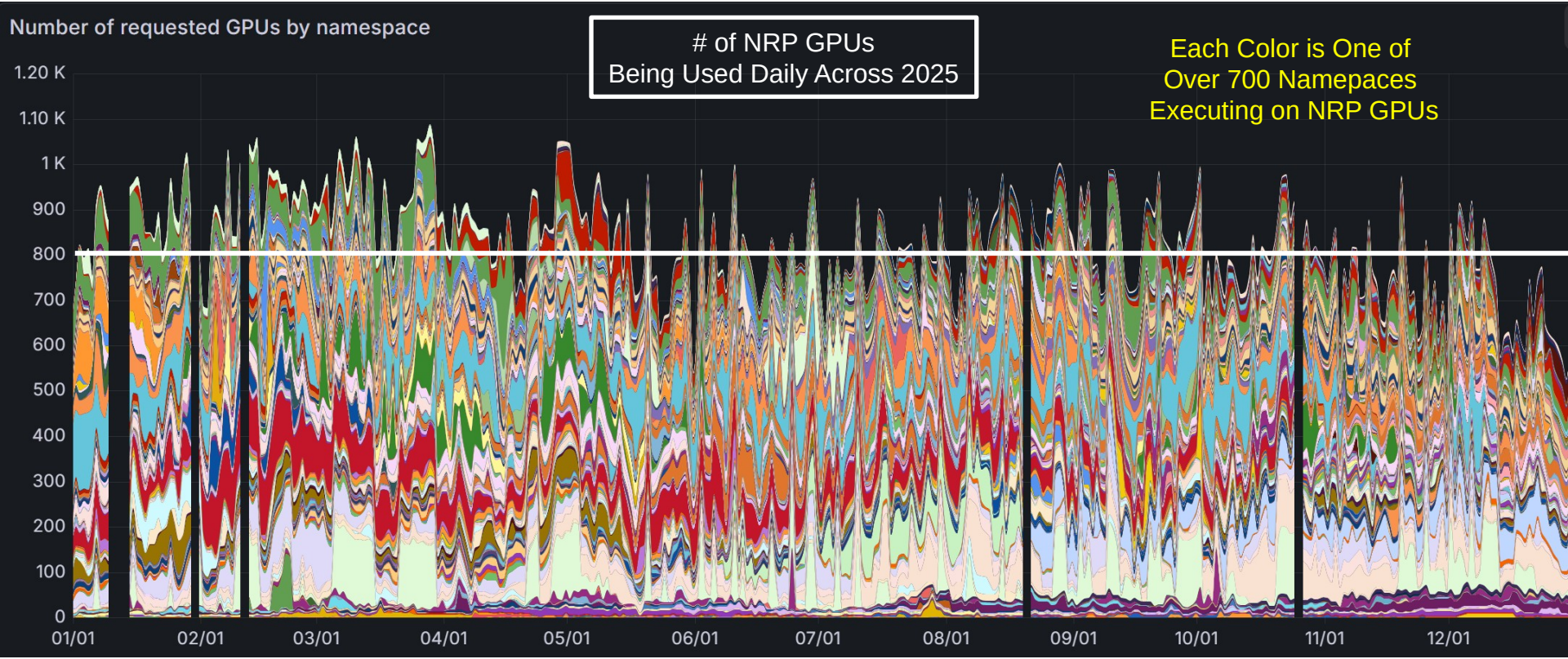
Slide Source: Frank Würthwein, SDSC Director, NRP Lead

NRP NATIONAL RESEARCH PLATFORM

CENIC AIR is the California Portion of the National Research Platform



NRP Runs a Large Number of Namespace Jobs Allocating ~800 GPUs At All Times



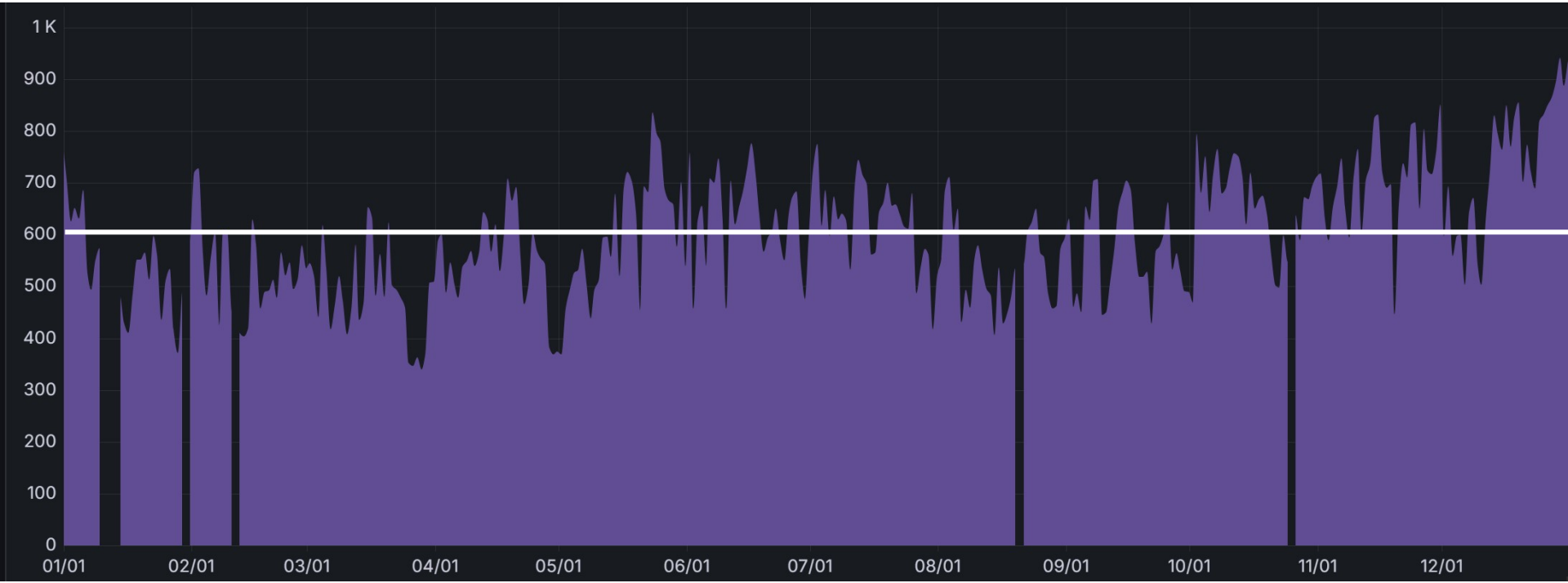
https://grafana.nrp-nautilus.io/

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NRP Nautilus

This Leaves ~600 GPUs Unallocated and Available at Any Given Time



https://grafana.nrp-nautilus.io/

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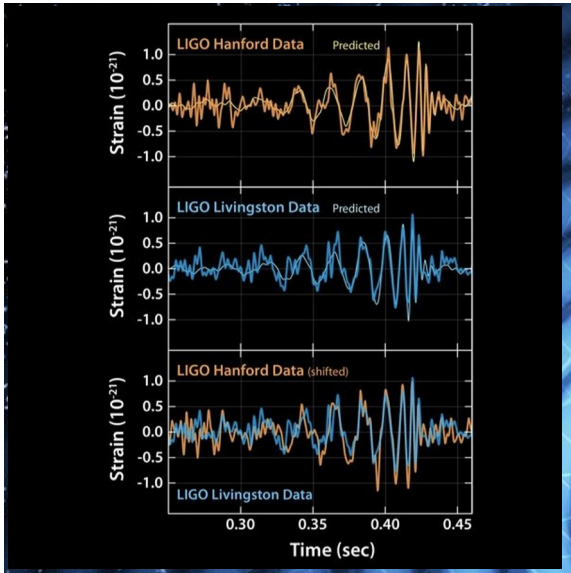
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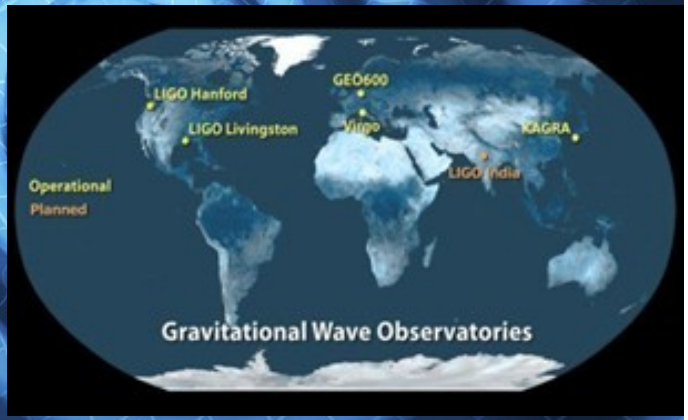
Five Diverse Examples of NRP Namespaces Using CENIC AIR GPUs in 2025

- Gravitational Wave Detection (Caltech)
- Climate Analytics (UCSD)
- Image Denoising (CSU Northridge)
- Brain Immune Cell Classification (Cal Poly Humboldt)
- Reptile and Amphibian Genomic Analysis (Cal Poly San Luis Obispo)

Gravitational Wave Observatories Have Created a New Window on the Universe







Ripples in Spacetime

Slide Adapted from Phil Harris, MIT LIGO at 5NRP Workshop

The International Gravitational Wave Detector Network Feeds Time Series Datasets into OSG, Then OSG Uses NRP GPUs for Analysis

All OSG User Communities
Use HTCondor for
Resource Orchestration

HTCondor
High Throughput Computing

OSG Consortium
Advancing Open Science through High Throughput Computing



LIGO Sees NRP GPUs as
Just Another OSG Resource

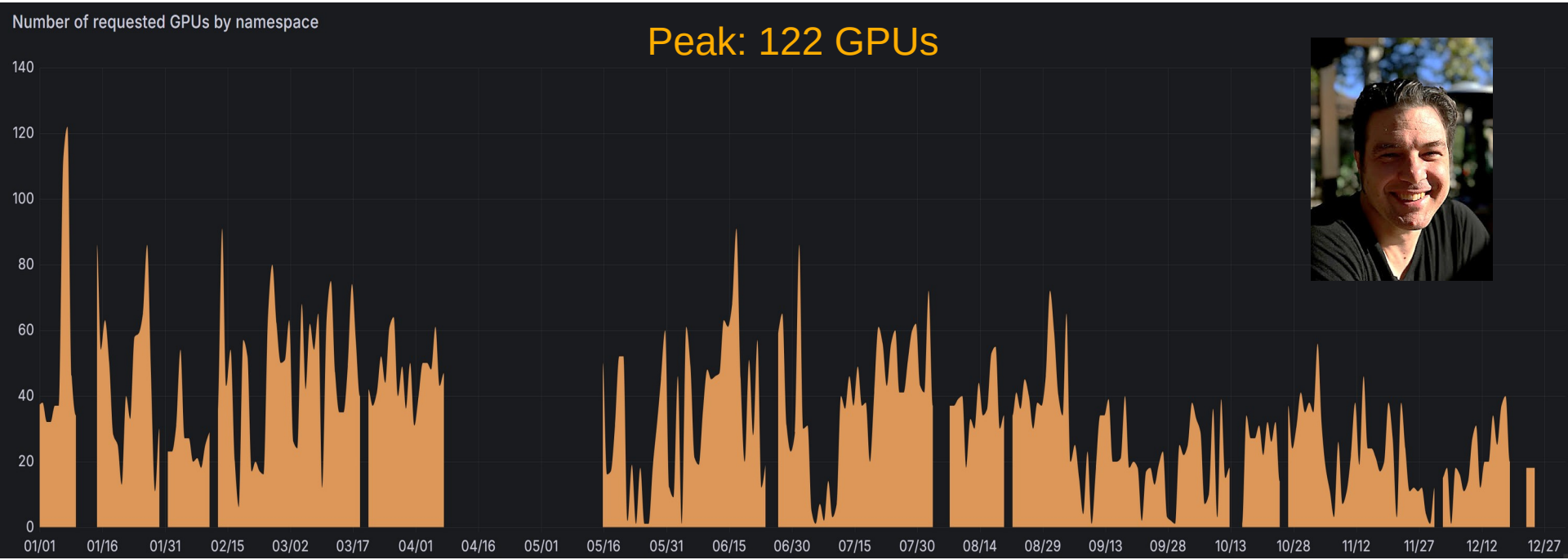
Source: Frank Würthwein,

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Caltech LIGO Data Analysis Computing Manager Peter Couvares: Analyzing Massive Datasets from LIGO to Discover Gravitational Waves



In 2025:

267,008 GPU-hrs on namespace: osg-ligo

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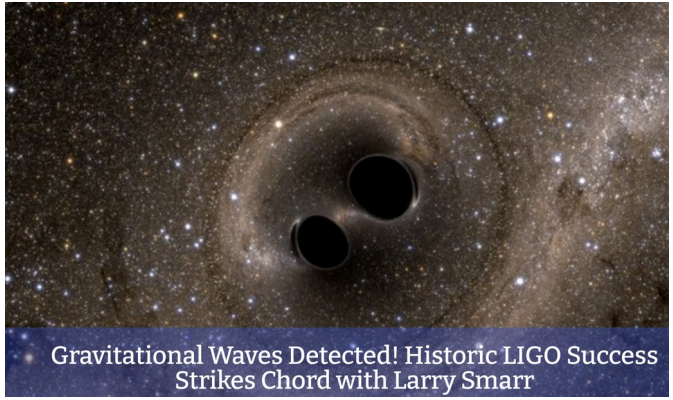
Fifty Years From the First Computation to a Catalog of Gravitational Waves From Collisions

First Computed Gravitational Radiation From a Black Hole Collision (1976)





40 Years



HPCwire by John Russell | February 12, 2016

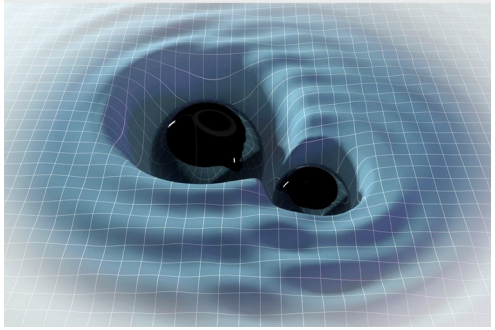
10 Years

March 5, 2026 2 min read SCIENTIFIC AMERICAN

The universe is filled with a cacophony of colliding black holes

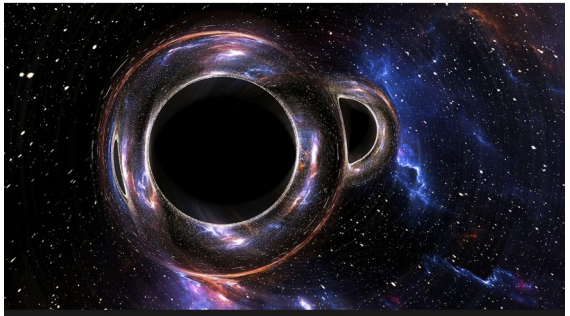
A new catalog of gravitational waves more than doubles the known number of these spacetime ripples

BY CLAIRE CAMERON EDITED BY CLARA MOSKOWITZ



Caltech Menu

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Gravitational-wave observatories release new catalog of detections

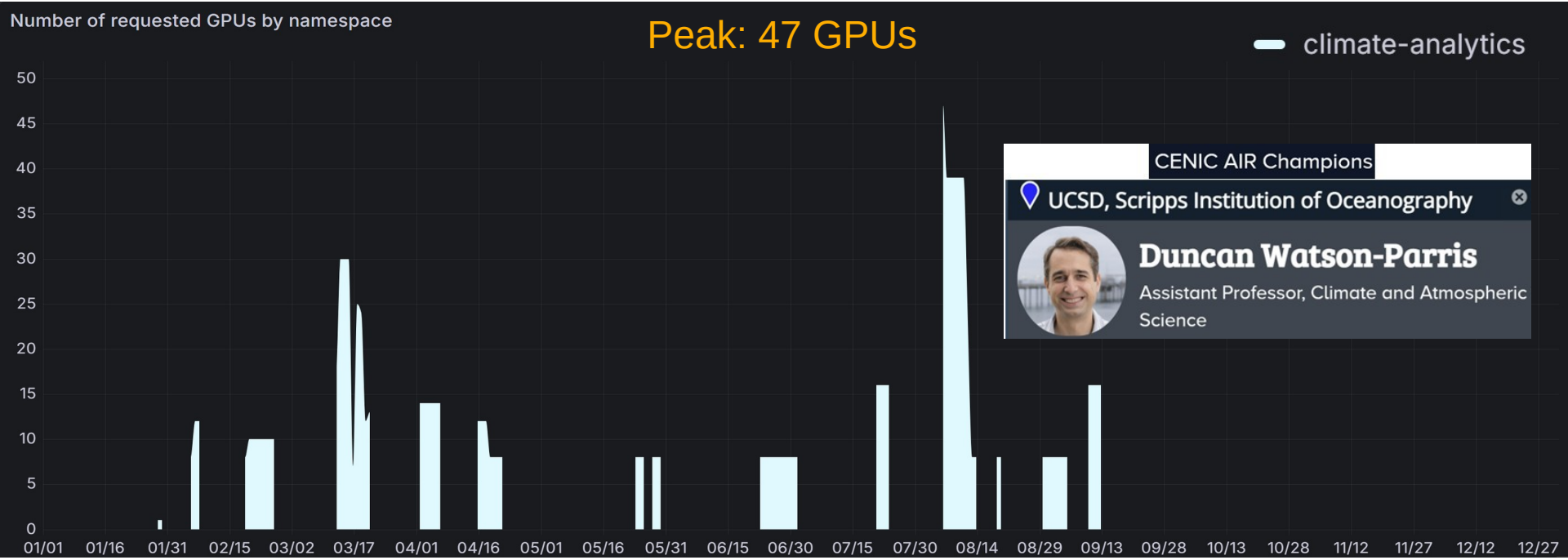
March 05, 2026

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UC San Diego Professor Duncan Watson-Parris
Using Machine Learning to Better Understand Clouds and Climate Interactions



In 2025:

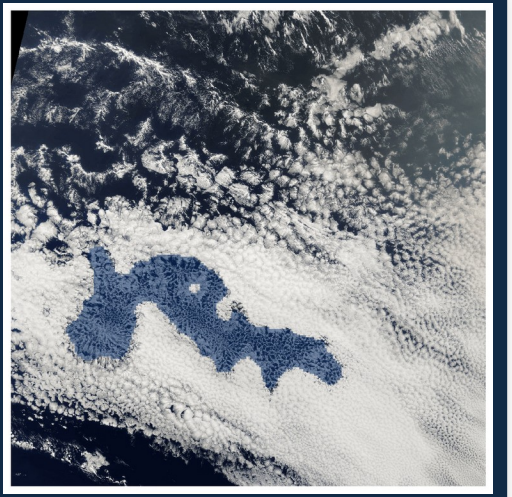
27,754 GPU-hrs on namespace: climate-analytics

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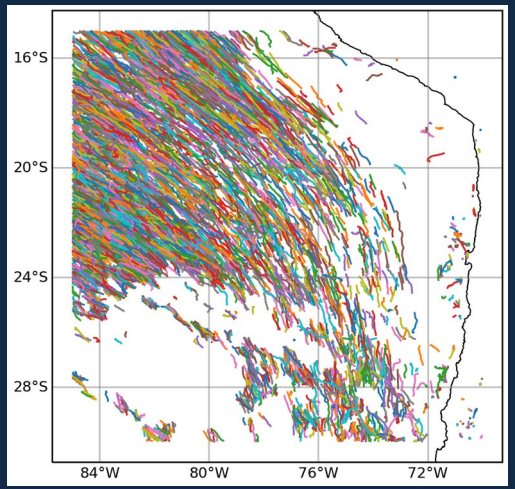
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NRP Nautilus

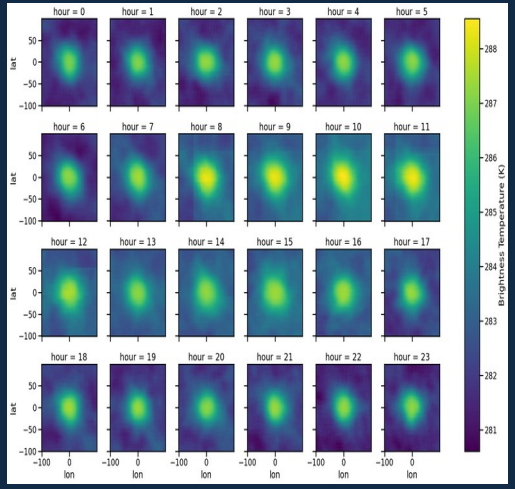
Tracking Open Holes (Cells) in Subtropical Marine Stratocumulus Clouds, from Geostationary GOES-16 Datasets Reveals New Cloud Dynamics



Deep Learning U-Net Model Trained on NRP
to Detect & Segment Open Cellular Clouds



NRP GPUs Analyzed 500k+ Individual Cells,
Tracked Every 10 minutes, Over a Month



24h Composite:
Brightness Temperature

Diurnal cycle

First observational Evidence of Strong Diurnal Modulation of Open-Cell Extent, Peaking at Midday

SST dependence

Cell Area Scales with Sea Surface Temperature via Rayleigh-Bernard Convection

Microphysics

Cloud Droplet Size Peaks Before
Cell Formation, then Declines as Cells Expand

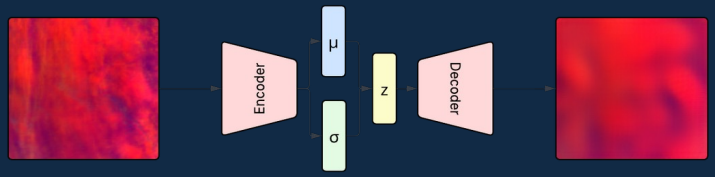
Duncan Watson-Parris, Director Climate Analytics Lab --
Halicioglu Data Science Institute & Scripps institution of Oceanography, UCSD
Using NRP Compute

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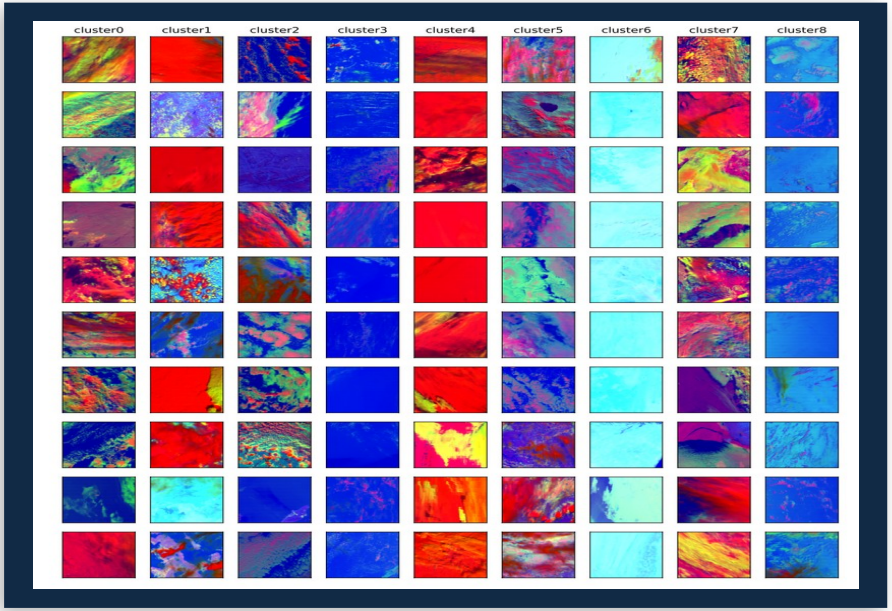
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Current Climate Models Assume Clouds Are of Discrete Types (Cumulus, etc.) - NRP Revealed The Need for a Continuous Representation of Cloud Morphology



Variational Autoencoder Learns Continuous 2048-Dimension
Latent Space from 1.5M MODIS Multi-Spectral Satellite Image Tiles



Tile2Vec

Unsupervised Triplet Learning (Tile2Vec)

Variational Autoencoder (VAE)

Generative Neural Net That Learns a Continuous Latent Representation of Cloud Appearance, Placing Any Tile in a Smooth, High-Dimensional Space

Key result: NRP GPUs Allowed for K-means Clustering, Which Revealed NO Stable Optimal Cluster Count —
Confirming that Cloud Morphology Actually Occupies a Continuous Manifold, Rather Than Discrete Types, Leading Toward More Accurate Climate Models

Duncan Watson-Parris, Director Climate Analytics Lab --
Halicioglu Data Science Institute & Scripps institution of Oceanography, UCSD
Using NRP Compute

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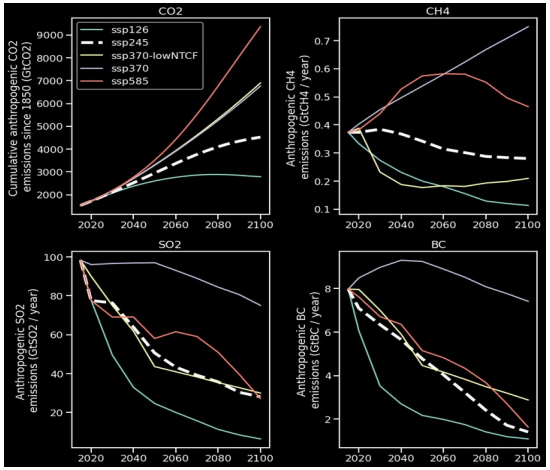
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Climate Emulators Learn the Input-Output Relationship of a Supercomputer Climate Model

- Then Generate 50 Years of Global Daily Temperature & Precipitation Fields in ~100 Minutes on a Single GPU

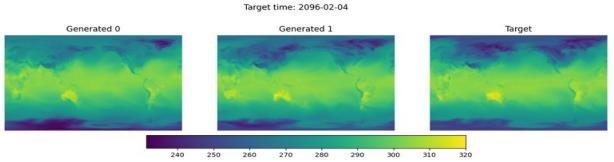
International Coupled Model Intercomparison Project (CMIP6) Forcing Inputs



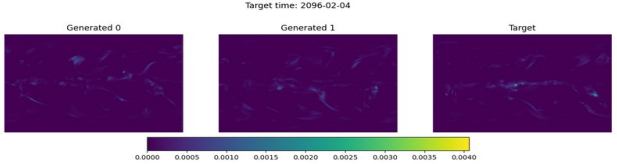
Diffusion Model

ClimForGe:
Climate Emulation for Daily Risk Assessment Using Diffusion Models

Generated Temperature (TAS)



Generated Precipitation (pr)



365x Higher Temporal Resolution than Existing Emulators

2x Spatial Resolution vs ClimateBench Baselines

8 NRP GPUs for Training (V100s); 1 A100 for Inference

NRP GPUs Used for Climate Projections, Using Diffusion Model Emulators, Same Class of Generative AI Behind Photorealistic Image Generators

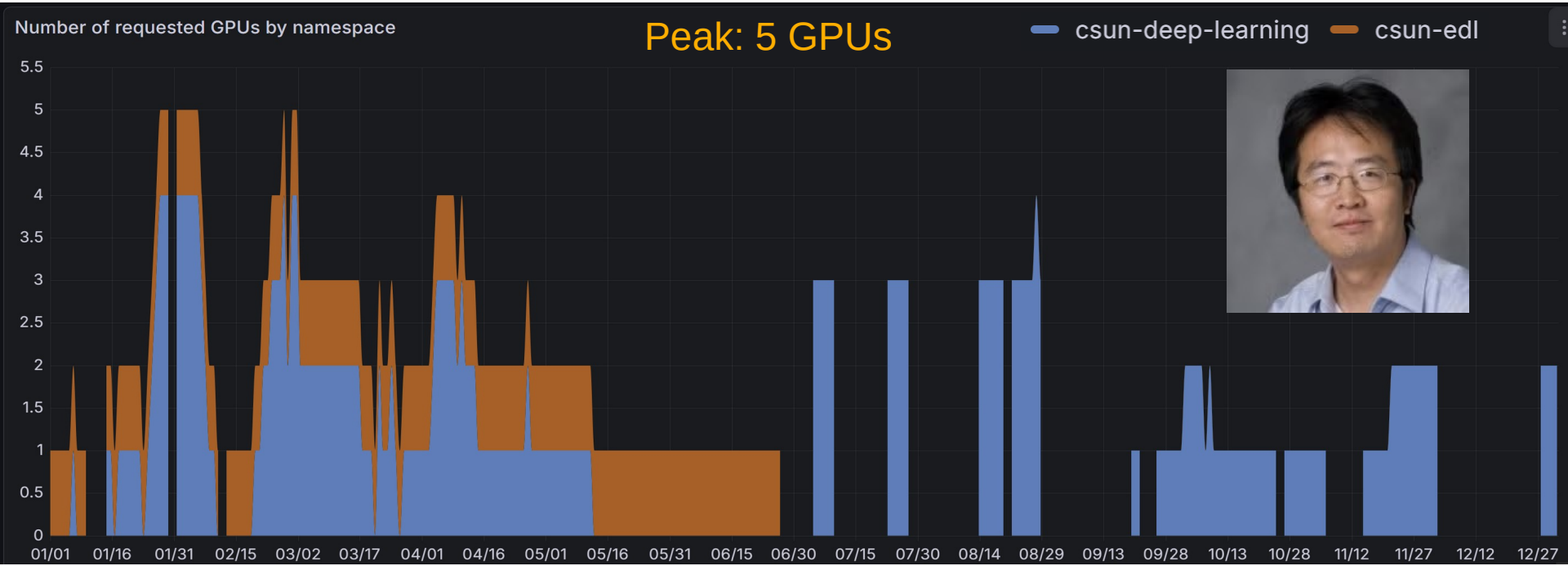
Duncan Watson-Parris, Director Climate Analytics Lab --
Halicioglu Data Science Institute & Scripps institution of Oceanography, UCSD
Using NRP Compute

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CSU Northridge Professor Xiyi Hang
Deep Learning Models for Image Denoising Processing



In 2025:

12,788 GPU-hrs on two namespaces: csun-deep-learning & csun-edl

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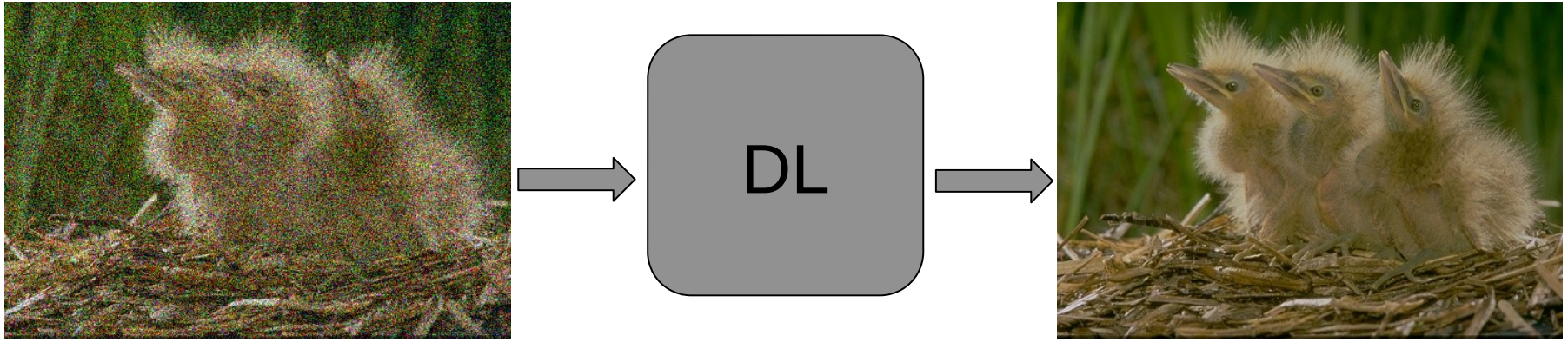
Complex Deep Learning Models (CNNs and Transformers) are Research Tools for Image Restoration

Deep Learning Models Require:

- Millions of Model Parameters
- Very Difficult to Train the Models without GPUs!

With the Agreement Between CSUN and NRP/CENIC AIR:

- Free Access to Multiple GPUs
- Easy to Create JupyterHub Servers
- We are Now Able to Work on Deep Learning Research!



Source: Xiyi Hang

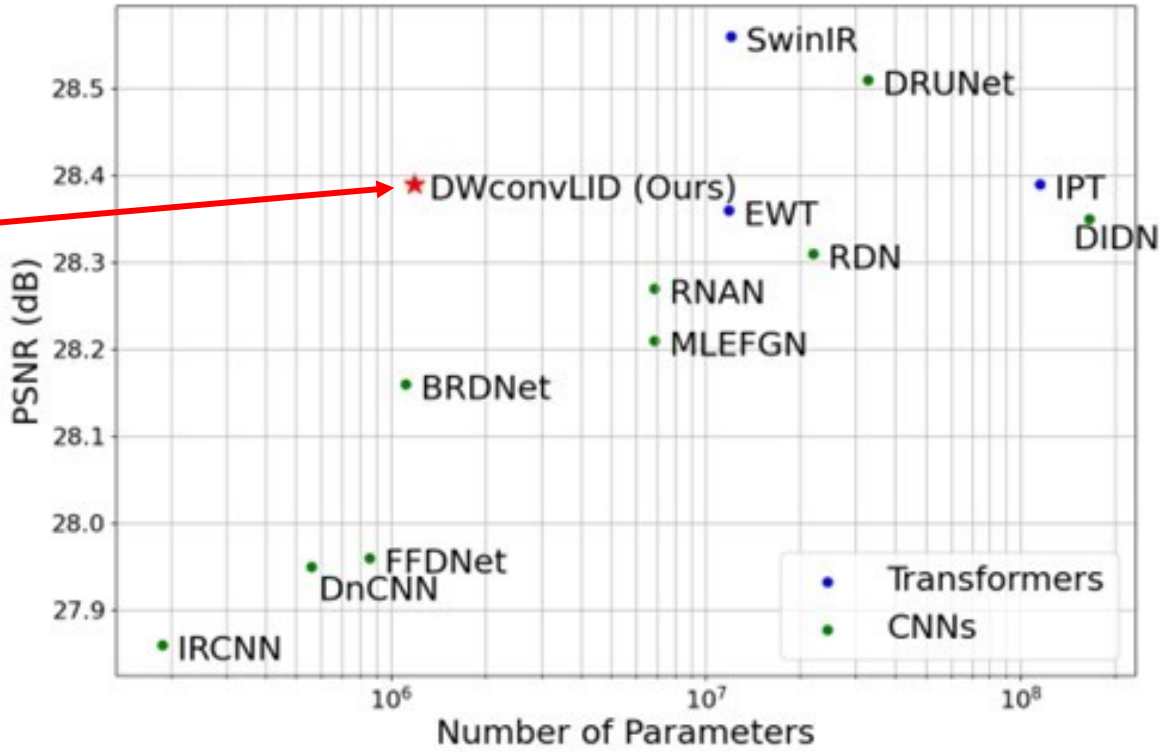
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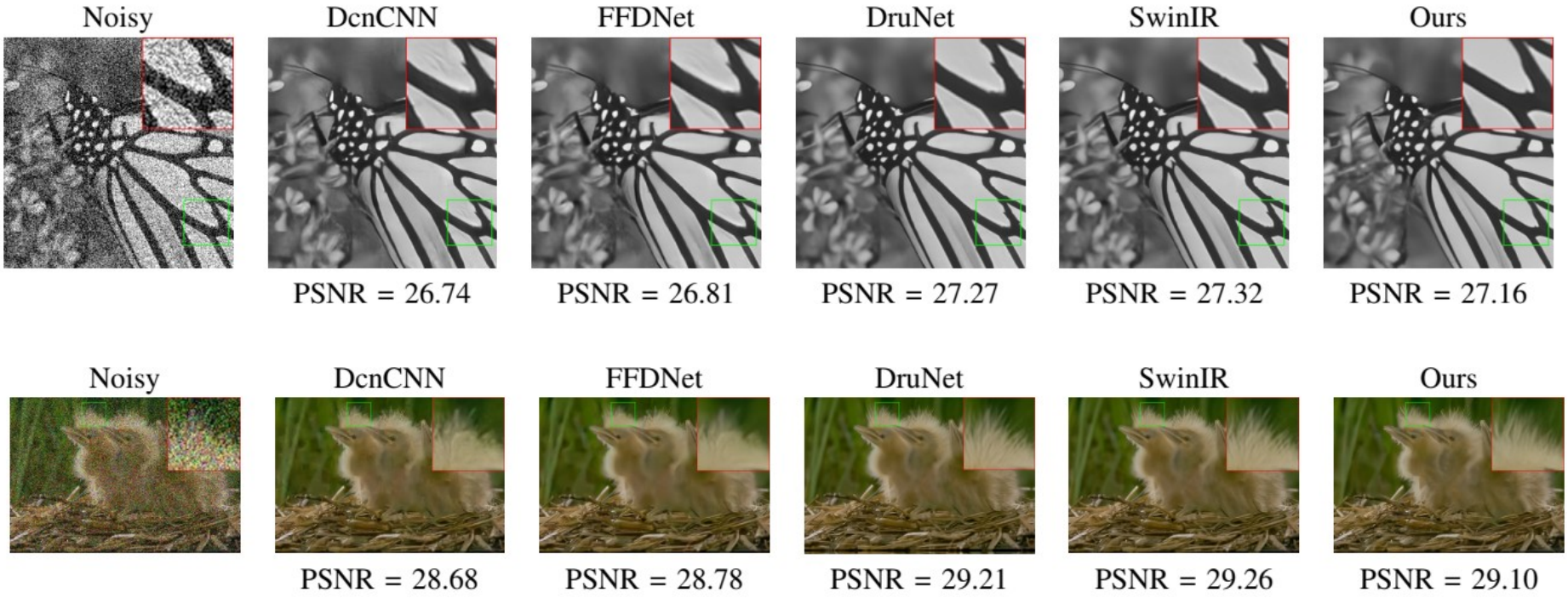
CENIC AIR
Enabled the Development of a Much More Efficient Deep Learning Model

"With CENIC AIR, We Developed a Very Efficient Model with Only 1.2 M Model Parameters and Performance Close to the Large Models."
- CSUN Professor Xiyi Hang



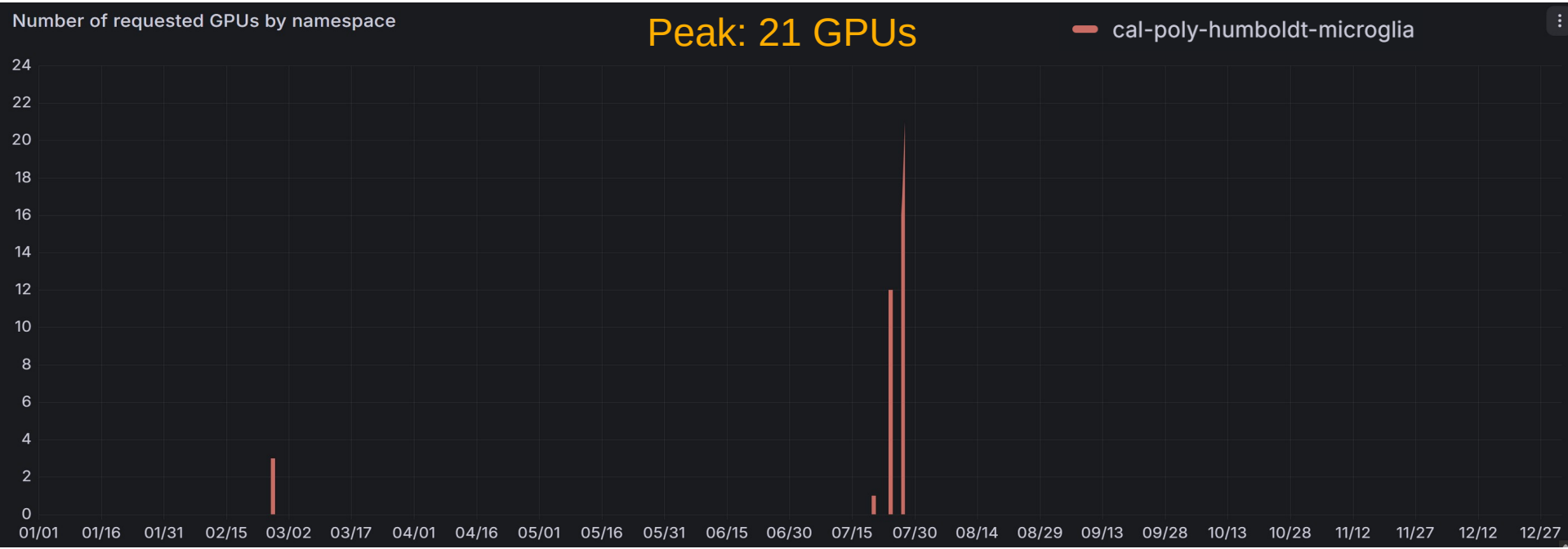
Source: Xiyi Hang

Comparison of Our Model to Prior Models



Source: Xiyi Hang

Cal Poly Humboldt Undergraduate John Gerving:
An Automated System to Quantify Brain Microglia Cells Using Computer Vision



In 2025:

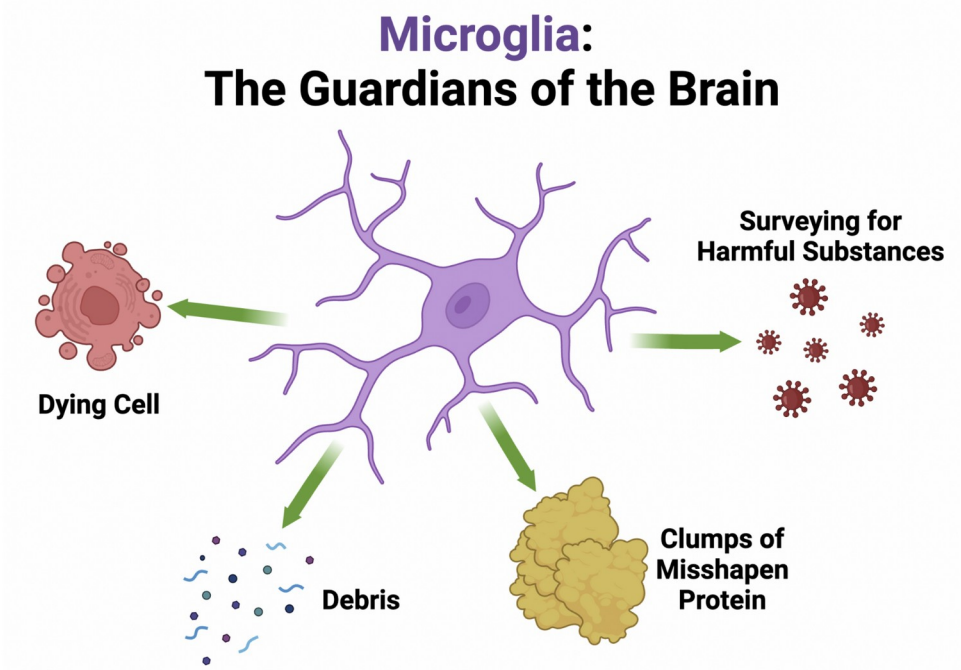
2,246 GPU-hrs on namespace: cal-poly-humboldt-microglia

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Microglia are Immune Cells That Live Only in the Brain



An overview of what Microglia do in the brain. Figure made by : Rana Abdelhalim using BioRender.
www.ataxia.org/scasourceposts/snapshot-what-are-microglia/

Microglia Have Multiple Phenotypes,
Whose Classification
Can Provide Insights
on the Overall Health of the Brain

John Gerving Used CENIC AIR GPUs to Develop an Automated Brain Microglia Phenotype Classification Method

Automated Microglial Phenotype Classification: A Comparison of Transformer-Based and Convolutional Vision Models

Department of Mathematics, Cal Poly Humboldt, Arcata CA 95521
John Gerving
Faculty Advisor: Kamila Larripa

NSF grant 2245839

1 Overview

Microglia, as the resident immune cell of the central nervous system, play an important role in the development and overall health of the brain. The quantification of microglia and classification of their activation state can provide information about the state of neuroinflammatory processes in the brain [3]. This project assesses the accuracy and performance of two models, Faster R-CNN and DINO models in their ability to detect and classify the phenotype of microglia by their precision and model size.

2 Background

Identifying microglia phenotypes from images is crucial for understanding their roles in health and disease. Microglia exhibit diverse morphological and functional states (e.g., proinflammatory versus homeostatic) that reflect their responses to changes in the brain microenvironment, epigenetic regulation, and disease context [3]. Image-based analysis allows for spatial and temporal mapping of these phenotypes, providing insight into neuroinflammatory processes and neurodegeneration [4]. Traditionally, object detection models like Faster R-CNN have been based on classical convolutional neural networks [5]. However, the transformer architecture and resulting vision transformer has allowed for end-to-end object detection training, resulting in models like DETR and DINO. Transformer-based models have achieved state of the art performance on multiple object detection benchmarks [2].

3 Methodology

We train two models on a dataset of 1,422 annotated images of microglia collected via light microscopy [1]. Each image contains bounding boxes of annotated microglia as well as the class of a corresponding microglial cell, either activated or non-activated. We perform multiple techniques to address a significant class imbalance leading to more instances of non-activated microglia than activated microglia. We oversample instances of activated microglia and perform data augmentation techniques such as random rotation, scaling, and cropping. Using this dataset, we train instances of Faster-RCNN and DINO. We compare the mean average precision (mAP) over 5 trials of each model as well as the time to convergence for each model.

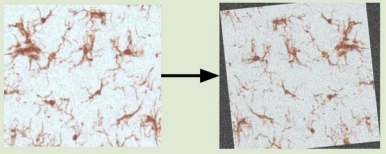


Figure 1: Image A is an original image from the dataset. Image B is the resulting augmented image [1].

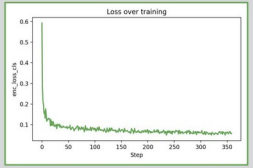


Figure 2: Loss during a training run of DINO.

4 Results

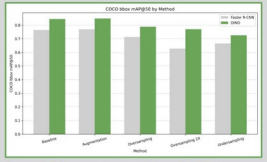
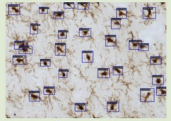


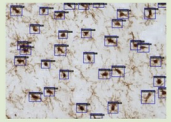
Figure 3: Mean average precision of detections with an intersection over union (IoU) threshold >0.5, compared across data augmentation techniques.

	Faster R-CNN	DINO
Params	99M	218M

Figure 4: Parameter count of Faster R-CNN and DINO,



Ground Truth



Predicted

Figure 5: Ground truth image [1] and bounding boxes predicted using DINO trained with augmented dataset.

5 Discussion

Our results demonstrate that while DINO is more computationally expensive, it consistently outperforms Faster R-CNN in detecting and classifying microglial cells across a range of dataset configurations. Despite our use of sampling methods, introducing data augmentations on the base dataset still led to the best overall results. This demonstrates the limitations of the dataset used and the class imbalance of activated versus non-activated microglia. Addressing this class imbalance in the creation of future datasets could help to improve the classification accuracy of our model.

6 Future Work

Using computer vision models, we can more effectively automate the detection, quantification, and classification of microglial cells. By collecting a greater quantity of high-quality data, we can enable object detection models to detect microglia across a wider range of microscopy settings. In addition, instances of various classes of microglia activation can be collected in order to reflect a wider range of morphological states.

7 Supplemental Materials:

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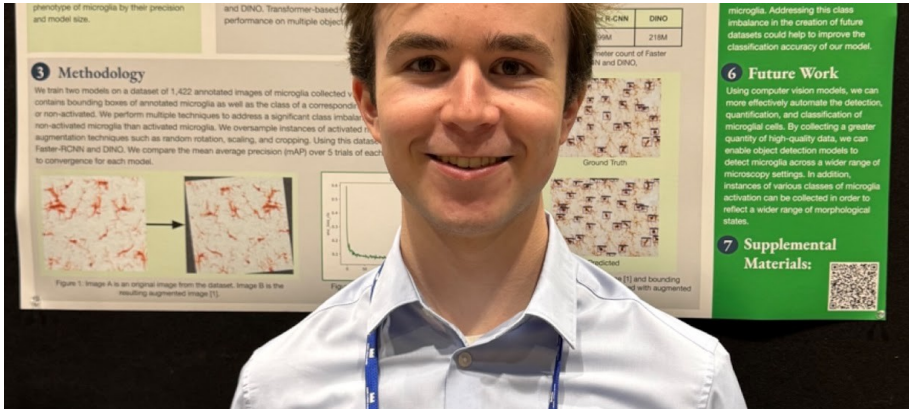
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John Gerving's Research Won the 2025 MAA Janet L. Andersen Award for Undergraduate Research in Mathematical or Computational Biology



Kamila Larripa
Associate Professor
DEPARTMENT OF MATHEMATICS & DATA SCIENCE
Cal Poly Humboldt.



MAA
MATHEMATICAL ASSOCIATION OF AMERICA

MAA MATHFEST 2025 | SACRAMENTO, CA

John Carried Out His Microglia Research
Under Cal Poly Humboldt's Professor Kamila Larripa.

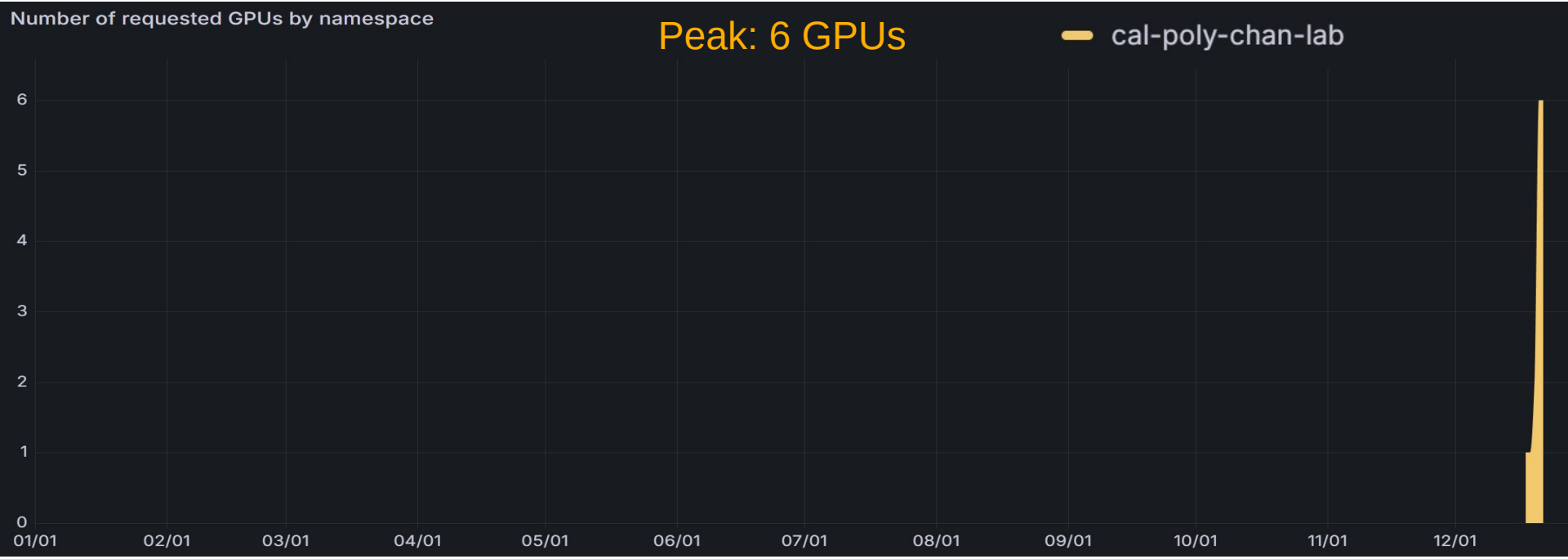
He is Currently an Undergraduate
at UC Berkeley in Applied Mathematics

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Cal Poly San Luis Obispo Professor Lauren Chan
Evolutionary Biology and Conservation Genetics



In 2025:
253 GPU-hrs on namespace: cal-poly-chan-lab

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The Chan Lab Uses CENIC AIR to Enable Complex Computational Genomics

- **Genomic resources for non-model organisms allow us to:**
  - **Reconstruct the evolutionary history of groups**
  - **Test for evolutionary adaptation and population connectivity**
- **The inferences we can make can have important implications for conservation and management**
- **A challenge is that reptile and amphibian genomes can be huge:**
  - **Lizards: 2 billion base pairs (Gb), Frogs: 4-10 Gb, Salamanders: estimated 30-90+ Gb!**



Lauren Chan, Assoc. Prof.
Cal Poly SLO







Source: Lauren Chan

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Amphibian and Reptile Conservation Genetics

- Two main tasks studying the Federally Endangered Dunes Sagebrush Lizard
  - Assembly of a reference genome for this non-model organism
  - Whole genome resequencing for 100 individuals to estimate connectivity, inbreeding, and adaptation across the range
- Using the NRP!
  - High memory reference genome decontamination steps
  - GPUs to call variants across entire genome for 100 individuals
  - Post-calling filtering and data processing
  - Comparative genomics



Kat Arrizon, UG
Cal Poly SLO

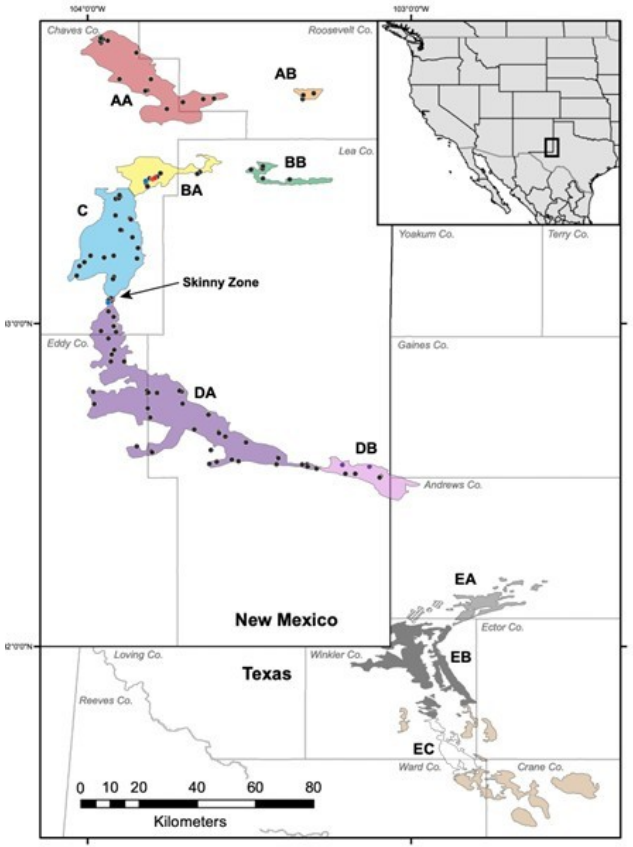


Emi Degembe, UG
Cal Poly SLO



Sydney Gutierrez, UG
Cal Poly SLO





Source: Lauren Chan

Future NRP Use

- Genomic studies of California amphibians and reptiles, including the Channel Islands
- Local adaptation, population connectivity
- Island colonization history and demographic history
- Role of humans in ecosystem change and colonization across millennia





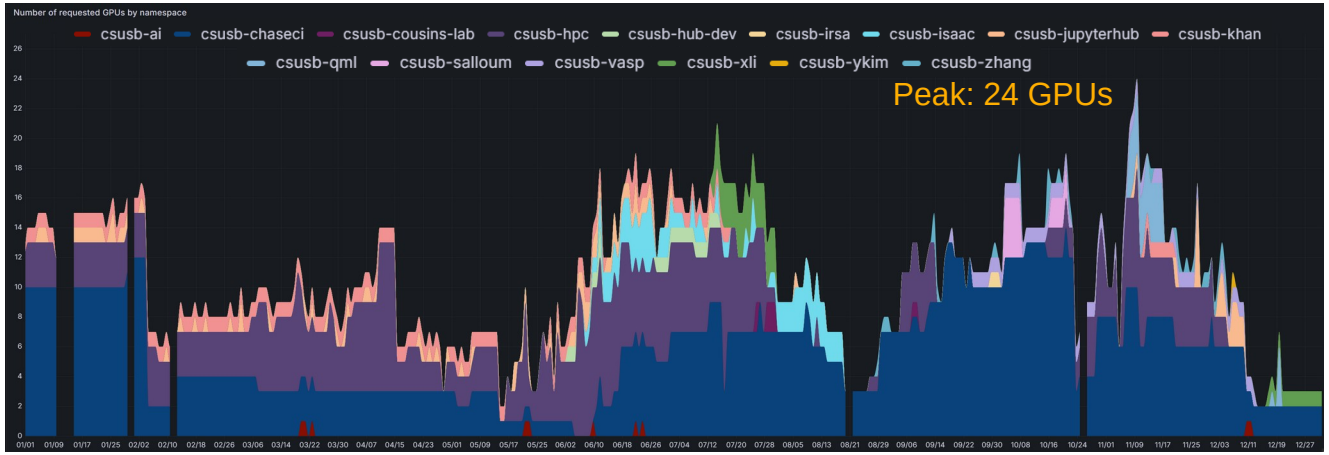


Source: Lauren Chan

jupyterhub is the Multi-User Version of the Jupyter Notebook



CSU San Bernardino Has Perfected The Use of Jupyterhub to Enable Many Faculty and Students To Use CENIC AIR GPU-Hours

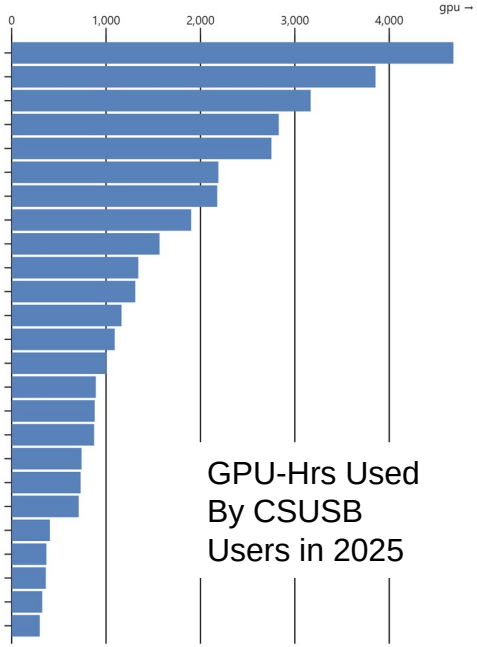


2025

90,862 GPU-hrs on 15 namespaces

https://grafana.nrp-nautilus.io/

Each Blue Bar is
a Different CSUSB User



https://observablehq.com/

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Likewise SDSU's NSF TIDE Grant Has Enabled Many CSU Researchers to Gain Access To GPU-hrs Through CENIC AIR

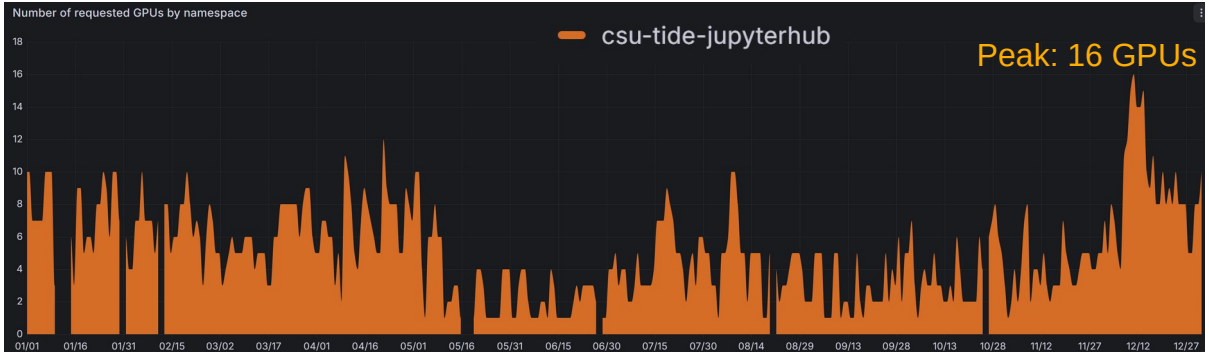
Monday, March 30, 2026

3:05 - 4:05 pm
LECTURE
REGENCY ROOMS 4-6

Lessons Learning: Building a Shared Cyberinfrastructure Across the CSU with TIDE

Gerard Au, Mike Farley

The Technology Infrastructure for Data Exploration (TIDE) project (NSF #2346701) received CENIC's 2024 Innovations in Networking Award for Equitable Access to Cyberinfrastructure. This session highlights how TIDE has strengthened research collaboration across the California State University (CSU) system by leveraging CENIC AIR and the National Research Platform (NRP). Through this partnership, TIDE delivers a powerful shared cyberinfrastructure that connects CSU campuses, enabling researchers to access high-performance computing and data resources more equitably and efficiently.

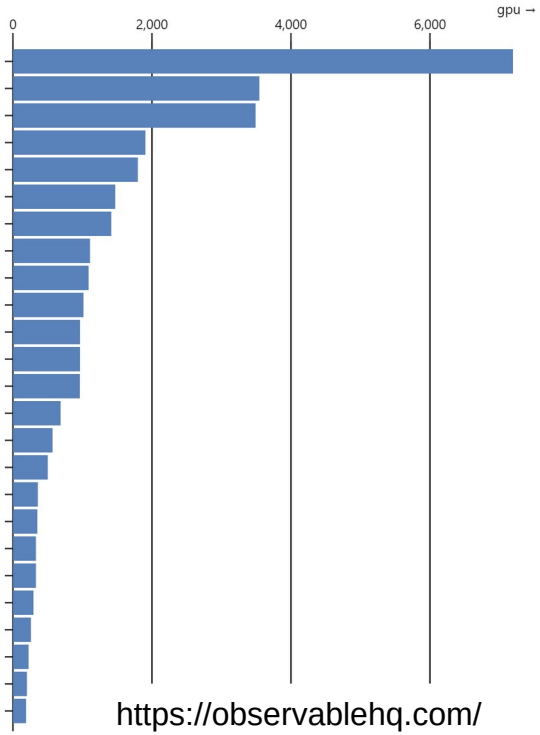


2025

42,949 GPU-hrs on namespace csu-tide-juypterhub

https://grafana.nrp-nautilus.io/

Each Blue Bar is
a Different CSU TIDE User



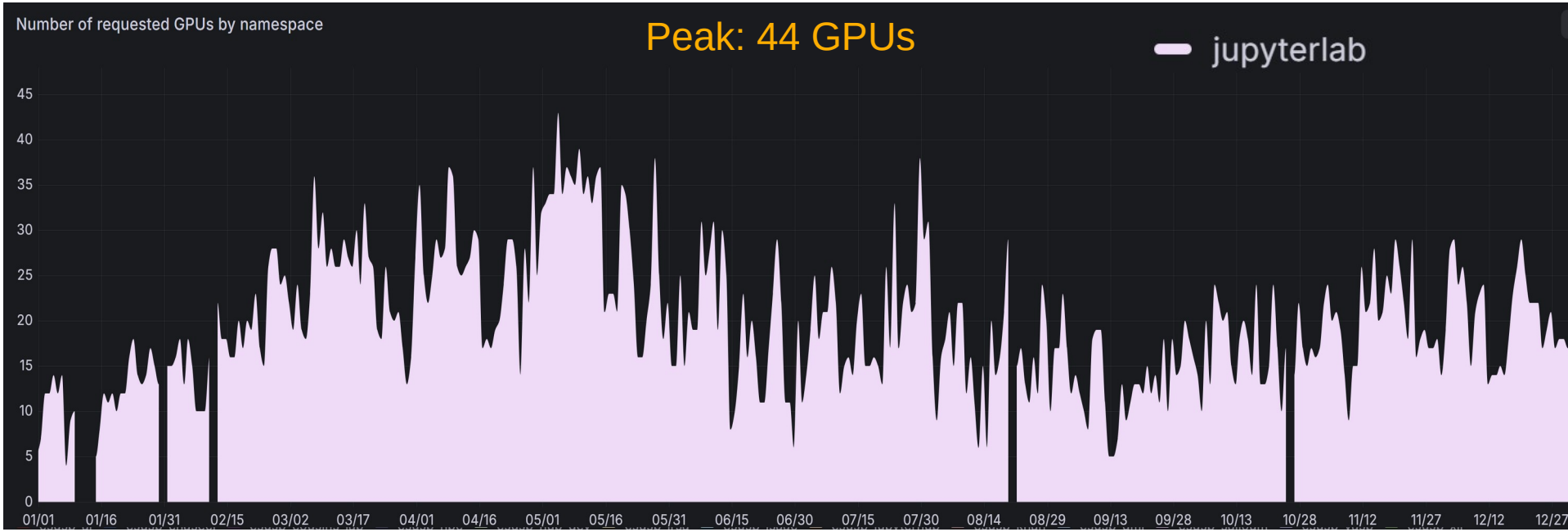
https://observablehq.com/

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Finally, a Single NRP Namespace *jupyterlab* (Larry Smarr, PI) Has Had Over 500 Users in 2025 That Used More Than 1 GPU-Hours



In 2025:

149,401 GPU-hrs on namespace: jupyterlab

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CENIC AIR Supported 341 of the 500 National Users of the NRP namespace *jupyterlab*

CENIC AIR *jupyterlab* Users
Were From:
7 of 10 UCs
13 of 23 CSUs
SDCCD

Three Examples of Large *jupyterlab* Users in 2025:

- **CSU Dominguez Hills**–Professor Rama Malladi (Computational Finance)
- **CSU Fullerton**-Graduate Student Akshat Desai & Professor Rakesh Mahto (MRI Image Classification)
- **UC Riverside**-Graduate Student Dimitris Chatziparaschis (Precision Agriculture)

CSU Dominguez Hills Professor Rama K. Malladi
Used Machine Learning to Explore Predictability of Bear Markets and Crashes



Rama K. Malladi
PhD, CFA, CAIA, FRM, PMP
Professor of Finance
CSU Dominguez Hills

"CENIC AIR has transformed my research life and put me on a level playing field.
I have now been able to develop and test several algorithms in the areas of economics and financial econometrics.
In a nutshell, I am now able to do what I have always dreamed of doing,
but could not do for lack of technical resources."

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Using CENIC AIR to Bring Machine Learning to Computational Finance

Professor Malladi Used
3381 GPU-hrs & 21,482 CPU Core-hrs
On *jupyterlab* namespace in 2025

Research Problem:

Using supervised machine learning models and a broad set of U.S. macroeconomic variables, the analysis compares the predictability of prolonged market downturns with that of sudden equity crashes.

Core finding:

A fundamental asymmetry exists in financial predictability — persistent bear-market regimes are highly forecastable, while sudden crashes are essentially unlearnable from macroeconomic data, resolving longstanding debates about market timing feasibility.

CSU Fullerton Graduate Student Akshat Desai Used Machine Learning for Brain MRI Image Analysis and Classification

"My research under Professor Rakesh Mahto focuses on applying machine learning and radiomics analysis to brain MRI data for Alzheimer's disease classification.

Using MRI scans from the ADNI dataset (1,229 subjects), I developed a pipeline to extract high-dimensional texture and shape features from hippocampal and amygdala subfields.

These features were used in a two-stage machine learning framework (LASSO feature selection and XGBoost classification) to distinguish Alzheimer's Disease, Mild Cognitive Impairment, and Cognitively Normal subjects."
-Akshat Desai, CSU Fullerton



Graduate student Akshat Desai (left) with faculty research adviser Rakesh Mahto

Desai and Mahto Used 4500 GPU-hrs & 51,315 CPU Core-hrs on *jupyterlab* namespace in 2025

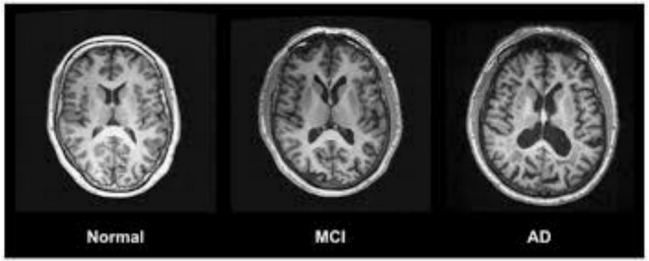
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Large Dataset of Human Brain MRIs Are Analyzed with Machine Learning For Biological Signatures of Aging

- **Dataset Source:** Alzheimer's Disease Neuroimaging Initiative (ADNI) - Large-scale neuroimaging dataset used for Alzheimer's disease research.
- **Subjects**
  - Total: **1,229 participants**
  - **Cognitively Normal (CN):** 672
  - **Mild Cognitive Impairment (MCI):** 282
  - **Alzheimer's Disease (AD):** 275
- MRI scans provide structural brain information for regions involved in memory and cognition.



"CENIC AIR Resources
Enabled Efficient Processing
of 1,229 MRI Scans,
including Automated Brain Segmentation,
Radiomics Feature Extraction,
and Machine Learning Analysis."

Key Results:

1. Identification of Micro-Structural Imaging Biomarkers from Hippocampal and Amygdala Subfields
2. Evidence that Radiomic Features Capture Biological Signals Beyond Traditional Volumetric Measures

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Their Prior Published Research was on Breast Cancer Subtypes, Acknowledging NRP

Journal of Imaging

MDPI

Article

Multi-Class Classification of Breast Cancer Subtypes Using ResNet Architectures on Histopathological Images

Akshat Desai [1] **and Rakeshkumar Mahto** [2,*]

[1] Department of Computer Science, California State University, Fullerton, CA 92831, USA; akshatdesai@csu.fullerton.edu
[2] Department of Electrical and Computer Engineering, California State University, Fullerton, CA 92831, USA

J. Imaging **2025**, *11*, 284

"ResNet training and testing were conducted on a high-performance workstation equipped with an NVIDIA A100 GPU (40 GB of VRAM), an 8-core CPU, and 32 GB of RAM, provided through the National Research Platform (NRP) program."

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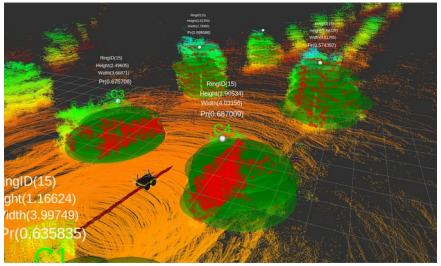
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UC Riverside Graduate Student Dimitris Chatziparaschis: Multi-Modal and Near-Ground Precision Agriculture with Mobile Robots

- **Need for Frequent Vegetation and Tree Data collection in the Field**
  - **Tree Health Status, Irrigation Management, Crop Yield, and Profit**
  - **Proximal Data Collection can be Laborious and Costly**
- **Proposed Solution**
  - **An Annotation-to-Detection Framework for Real-Time and On-the-Go Multi-Modal Object Detection in the Field with Instrumented Robots**

UC RIVERSIDE | ARCS Laboratory









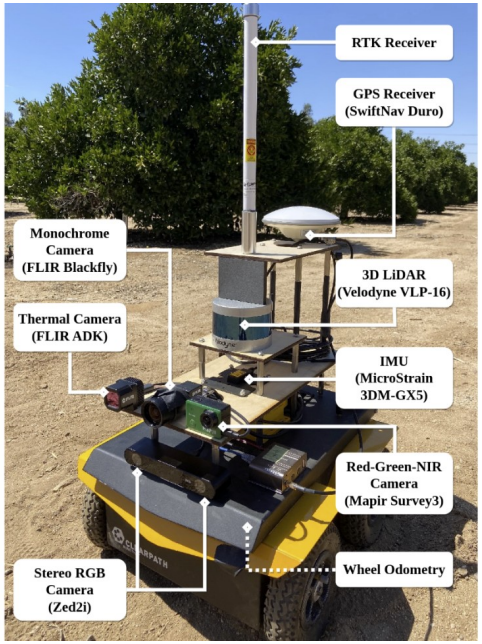
Chatziparaschis Used 8,018 GPU-hrs & 25,039 CPU core-hrs on *jupyterlab* namespace in 2025

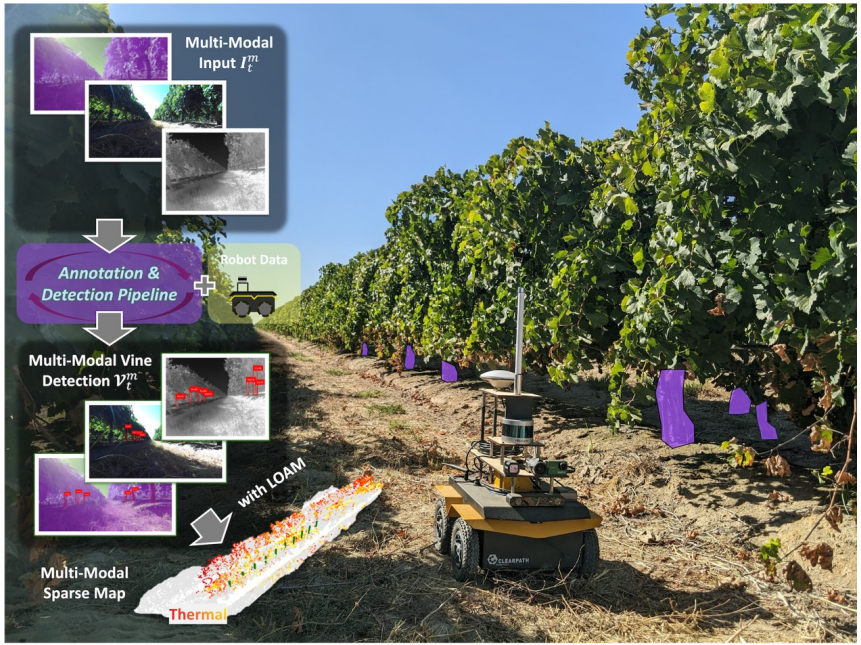
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Robot Configuration and Multi-Modal Sensing in the Field





"With CENIC AIR and *jupyterlab*, We are Now Able to Evaluate among Different Frameworks for our Agricultural Application and Train on our Open Available Datasets, such as CitrusFarm"

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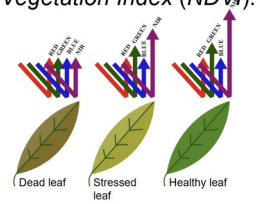
CENIC AIR
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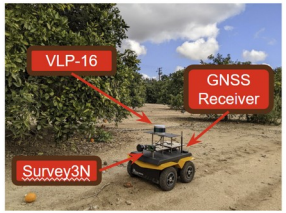
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CENIC AIR Enables New Opportunities For Technology Transfer Between UC Riverside and the Iron Horse Testbed Project

- **Areas of Precision Agriculture Future Collaboration:**
  - **Above the Canopy Vine Health Detection**
  - **Connecting Aerial-to-Ground and Cross-Modal Field Monitoring**
  - **Streaming Real-Time, Geo-Referenced, Near-Ground Robotic Data**

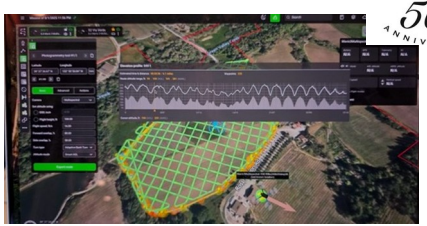
Normalized Difference Vegetation Index (NDVI):





CENIC





IRON HORSE VINEYARDS 1976 2026 50th ANNIVERSARY



UC RIVERSIDE ARCS Laboratory

Joy Sterling, Tom DeFanti, John Graham

UC Riverside PhD Advisor: Associate Professor Konstantinos Karydis, Department of Electrical and Computer Engineering

UC Riverside Close Collaborator: Associate Professor of Precision Agriculture Elia Scudiero, Department of Environmental Sciences

Conclusions

- **More Campuses:**
  - **Are Hosting CENIC AIR Nodes**
  - **Have Researchers and Educators Making Use of CENIC AIR Computational & Storage Resources**
- **The Diversity of Disciplines Using CENIC AIR for Research is Astonishing**
- **Machine Learning Applied to Large Datasets Can Be Transformative**
- **Impressive Novel Results Can Be Obtained With Relatively Few GPU-Hours Per Year!**
- **Yet Through CENIC AIR There are a Hundreds of Unallocated GPU-Hours Available**
- **Start Breathing CENIC AIR!**

Acknowledgements

- **Many Thanks for the Support That Has Made NRP and CENIC AIR Possible:**
  - **NRP Support: NSF grants OAC-1541349, OAC-1826967, OAC-2030508, OAC-1841530, OAC-2005369, OAC-21121167, CISE-1713149, CISE-2100237, CISE-2120019, & OAC-2112167**
  - **And by CENIC, Pacific Wave, MREN, GPN, NYSERNet, FLR, NEREN, SunCorridor, OARnet, SCLR, the Albuquerque GigaPoP, and Internet2**
  - **As Well as More than 130 Universities, Colleges and PoPs that Host Hardware and Share it as Part of the NRP Community**

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More Sessions to Come at CENIC 2026 on the Uses of CENIC AIR

Monday, March 30, 2026

12:20 - 12:50 pm
LECTURE
REGENCY ROOMS 4-6

Creating a Secure Science DMZ on your campus for NRP/CENIC AIR

Scott Claverie

3:05 - 4:05 pm
LECTURE
REGENCY ROOMS 4-6

Lessons Learning: Building a Shared Cyberinfrastructure Across the CSU with TIDE

Gerard Au, Mike Farley

4:30 - 5:00 pm
LECTURE
REGENCY GRAND BALLROOM

Minds in the Vines: Technology of the CENIC-Empowered Drones, Cameras, and LoRaWAN Sensors at the Iron Horse Vineyards Testbed

Thomas DeFanti, John Graham

Tuesday, March 31, 2026

2:20 - 3:05 pm
PANEL
REGENCY GRAND BALLROOM

Enabling Data-Driven Agriculture at Iron Horse Vineyards

Thomas DeFanti, Joy Sterling, Roya Salek, Joseph Ording, Jacob Gonsalves

Wednesday, April 1, 2026

9:30 - 10:30 am
PANEL
REGENCY GRAND BALLROOM

CENIC AIR and the CSUs: Case Studies and Lessons Learned

Dhusdee Chandswang, Thomas DeFanti, Mike Farley, Willie Peng, Dung Vu

12:00 - 12:45 pm
LECTURE
REGENCY GRAND BALLROOM

From A Single Dot, Bringing High-Performance Computing Across Disciplines in Education

Dhusdee Chandswang, Willie Peng

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