

# NEJAT CAN

+1(607) 542-6702 ◇ San Francisco, CA

[nejat3133@gmail.com](mailto:nejat3133@gmail.com) ◇ [linkedin.com/in/nejatcan](https://linkedin.com/in/nejatcan) ◇ [ncan33.github.io](https://ncan33.github.io)

## OBJECTIVE

---

Software engineer who specializes in 3D scene reconstruction, seeking machine learning roles in computer vision.

## SKILLS

---

<b>Languages</b>	Python, C/C++, CUDA, MATLAB, bash, Swift
<b>Technologies</b>	PyTorch, TensorFlow, Nerfstudio, Git, Google Cloud, AWS
<b>Communication</b>	Competed in World Debate Championships; Native speaker of English

## EXPERIENCE

---

<b>IMETALX Space Systems</b>	Jun 2025 – present
Computer Vision/Machine Learning Engineer	<i>San Francisco, CA</i>

- Drove algorithmic direction of a zero-to-one 3D reconstruction product, transforming a failing prototype into a deployed system within 2 months and securing a DoD contract.
- Pioneered adaptations of cutting-edge 3D vision methods (pose-free transformers such as VGGT and  $\pi^3$ , Gaussian Splatting, NeRFs) to extreme space-imaging conditions with sparse views, few features, and unconventional camera paths.
- Served as principal contributor owning >50% of the product's technical success, with autonomy to define and execute the entire product direction in a startup environment.

<b>University of Southern California</b>	Aug 2022 – May 2025
Ph.D. Research Assistant	<i>Los Angeles, CA</i>

- Developed a self-supervised VarNet for real-time 3D MRI reconstruction leveraging [Noise2noise](#) to enable robust training **in absence of ground-truth**. Implemented iterative physics-informed optimization with learnable refinement modules. Achieved high-accuracy end-to-end image reconstruction directly from undersampled k-space data.
- Designed a physics-informed constrained image reconstruction algorithm for dynamic MRI, achieving significant de-blurring of fine structures by optimizing a **spatial-temporal regularized** cost function using nonlinear conjugate gradient descent. Leveraged singular value decomposition for computational efficiency via **low-rank approximation**.

<b>Massachusetts Institute of Technology</b>	May 2021 – Nov 2021
Research Intern	<i>Boston, MA</i>

- Designed a self-supervised 4D CNN for low-latency diffusion tensor imaging, incorporating **residual learning** for stable training. Applied **physics-based constraints** to improve model accuracy. Maximized model performance by performing ablation studies and **optimized hyperparameters** via parameter sweeps. Outperformed the non-DL-based method by improving the reconstruction time by a **factor of 17.5x**, while maintaining high-fidelity with an **SSIM of 0.96**. Developed in **TensorFlow**.

## EDUCATION

---

<b>M.S. in Electrical Engineering</b> , University of Southern California	Aug 2022 – May 2025
---	---------------------

- Dropped out of Ph.D. in Electrical Engineering.
- *Research Areas*: 3D Reconstruction, Machine Learning, Image Processing
- *Courses*: Optimization, Inverse Problems, Machine Learning, Digital Signal Processing

<b>B.S. in Biomedical Engineering</b> , University of Rochester	Aug 2018 - May 2022
---	---------------------

- *Honors and Scholarships*: Rosenberger Prize, International Baccalaureate Scholarship, Dean's List