

Timothy Wu

+1 (571)-635-6685 - www.timothypwu.com - timothywu02@gmail.com - Active TS Clearance

EDUCATION

Carnegie Mellon University

M.S. in Artificial Intelligence Engineering (Electrical and Computer Engineering)

Pittsburgh, PA

Expected May 2026

Virginia Tech - GPA: 4.0/4.0

B.S. in Computer Science and Minor in Mathematics

Blacksburg, VA

August 2020 - May 2023

SKILLS

Programming Languages: Python, Java, C, MATLAB, Go, R, SQL

Machine Learning & Data Science Libraries: PyTorch, Tensorflow, Sklearn, Pandas, Numpy, SpaCy

Cloud Native Technologies: Kubernetes, Docker, Helm

Software Development & Management Tools: GitLab, Linux, Visual Studio Code, Jira

CERTIFICATIONS

Certified Kubernetes Application Developer - Issued July 2022

Certified GitLab Associate - Issued May 2022

WORK EXPERIENCE

AI/Machine Learning Research Engineer

Lockheed Martin - Herndon, VA

July 2024 - Present

- Engineered a large language model service to generate unit tests with 100% coverage from complex C++ code.
- Facilitated cross-functional collaboration by deploying and configuring AI projects across multiple Kubernetes environments, enabling other teams to effectively demo and leverage their capabilities.

AI/Machine Learning Research Engineer Associate

Lockheed Martin - Herndon, VA

June 2023 - July 2024

- Researched and implemented prompt engineering and fine-tuning methods to improve accuracy of open-source large language models to decompose text statements by an average of 30% compared to SpaCy models.
- Utilized Python Flask, gRPC, and ActiveMQ to create accessible endpoints to query large language model services.

NSF Funded Undergraduate Researcher

InfoVis Lab - Blacksburg, VA

February 2022 - May 2023

- Streamlined research team's Jupyter Notebook to allow easier user access for adding custom dimension reduction algorithms and customizing algorithm parameters.
- Developed a Jupyter Lab plugin with TypeScript to display cells in a 2D format for faster code comparisons.

Software Engineering Intern

CACI International - Ashburn, VA

May 2022 - August 2022

- Designed and deployed a landing page web application with ReactJS, GatsbyJS, Docker, and GitLab CI pipelines to AWS Elastic Container Registry and GitLab Pages.
- Created Power BI dashboards to better visualize incident and management data.
- Led eleven other interns as a scrum master working in an Agile environment with bi-weekly sprints.

Cloud Engineering Intern

Zeta Associates Incorporated - Fairfax, VA

May 2021 - August 2021

- Designed a reliable failover system that would migrate stateful resources across Kubernetes clusters utilizing Velero and MinIO.
- Automated migration process with shell scripts based on Prometheus metrics.

PROJECTS

- Handwritten Digit Recognition:** Programmed two different machine learning algorithms (Naive Bayes and Multilayer Perceptron) using only mathematical knowledge and NumPy to predict handwritten digits. <https://github.com/TomWoah123/CS4824-FinalProject>.
- AES Cryptography Project:** Recreated the AES Cipher algorithm using only mathematical knowledge and Python to encrypt and decrypt hexadecimal text. <https://github.com/TomWoah123/Cryptography-Project>.