Timothy Wu

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EDUCATION

Carnegie Mellon University   **Pittsburgh, PA**
M.S. in AI Engineering - Electrical and Computer Engineering (GPA: 4.0/4.0)   *Expected May 2026*

Virginia Tech   **Blacksburg, VA**
B.S. in Computer Science and Minor in Mathematics (GPA: 4.0/4.0)   *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, Apache Spark
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 (Part-time)   **Remote (Virtual)**
Lockheed Martin   *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   **Herndon, VA**
Lockheed Martin   *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   **Blacksburg, VA**
InfoVis Lab at Virginia Tech   *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   **Ashburn, VA**
CACI International   *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   **Fairfax, VA**
Zeta Associates Incorporated   *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

Reinforcement Learning Project   **Pittsburgh, PA**
Carnegie Mellon University   *November 2024 - December 2024*
- Implemented Value and Policy Iteration, Q-Learning, and SARSA algorithms to train an autonomous agent for optimal environment navigation using OpenAI Gym simulations.

Handwritten Digit Recognition   **Blacksburg, VA**
Virginia Tech   *March 2023 - May 2023*
- Programmed two different machine learning algorithms (Naive Bayes and Multilayer Perceptron) using only mathematical knowledge and NumPy to predict handwritten digits.