Michael Yoo

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EDUCATION

The George Washington University — Washington, D.C.

Bachelor of Science in Computer Science, Minor in Data Science — *Expected: May 2025*

EXPERIENCE

Data Science Researcher — Sept 2024 – Present

The George Washington University — *Washington, D.C.*

- led the development of a database as the sole technical contributor to catalog images of flags with mourning quotes placed at the Washington Memorial by families affected by COVID-19, providing a lasting resource for researchers and future generations.
- Identifying trends in visual and textual data to inform ongoing studies on public mourning practices, contributing valuable insights into how grief is publicly expressed during the pandemic.
- Authored detailed technical documentation and conducted training workshops to ensure that both technical and non-technical team members could effectively utilize the system.

Software Engineering Intern — Jun 2024 – Aug 2024

Corsha — *Tysons, VA*

- Optimized the Corsha automated testing suite by replacing custom methods with standardized tools, resolving 10+ recurring test failures, and improving reliability.
- Increased testing efficiency by implementing environment reuse, saving 40% of testing time, which reduced test cycles and allowed engineers to focus on feature development.
- Integrated Sonarqube for automated code reviews, ensuring early detection of issues and maintaining high code quality standards.
- Utilized Ansible, Kubernetes, and GoLang for deployment automation and testing coverage.

Software Engineer Intern — Jun 2023 – Aug 2023

Knack Works Inc. — *Chantilly, VA*

- Improved data accessibility and visualization on the DaaS project using GoLang, Python, Kubernetes, ELK, and Kafka, achieving a 25% faster query response time.
- Deployed Logstash in Kubernetes for PostgreSQL-to-Elasticsearch migration.
- Developed a GoLang service with an AWS S3-compatible storage endpoint, cutting data retrieval times by 15% and optimizing cloud storage efficiency.
- Collaborated with stakeholders in agile sprints, ensuring that technical solutions aligned with project goals and customer needs, demonstrating strong teamwork and communication.

PROJECTS

Raytheon AVC Competition | *Python, C, Jetson, ROS, UAV Systems, Computer Vision* — Aug 2024 – Present

- Led the Visual Processing subteam to develop computer vision algorithms for real-time detection and tracking of ArUco markers using Python and OpenCV.
- Implemented real-time communication between drones for coordinated navigation and precise payload delivery.
- Integrated Jetson and Raspberry Pi for onboard processing, optimizing system performance in dynamic environments.

Multi-classification Image Detection Model | *Python, Tensorflow* — Feb 2024 – May 2024

- Developed a Multi-Output Convolutional Neural Network for simultaneous object detection and classification.
- Built on MobileNetV2, the model includes a region proposal layer for precise bounding box prediction.

GWack Slack Simulator | *Java* — Nov 2022 – Dec 2022

- Developed a multithreaded client-server chatroom with a custom Java GUI.
- Supported real-time messaging, member list updates, and dynamic theme switching.

TECHNICAL SKILLS

Languages: Java, Python, GoLang, C, C++, SQL, JavaScript, HTML/CSS, R, PHP
Frameworks: Elastic Stack, Node.js, Flask, Apache Kafka
Developer Tools: Git, Docker, Kubernetes, Google Cloud Platform, AWS SDK, ArcGIS