

Daniel Ko

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 🏠 <https://ko28.github.io> ·  ko28 ·  daniel-ko1

EDUCATION

University of Wisconsin - Madison

Madison, WI

B.S. in Computer Science

Expected May 2022

3.9/4.0 Cumulative GPA

PROFESSIONAL EXPERIENCE

Zendesk

Madison, WI

Software Engineering Intern

Oct 2020 – June 2021

- Collaborated closely with local and global team members to build large scale, efficient, and safe **CI/CD** pipelines that deploy to over dozens of servers globally for 300 million end users.
- Created tool to provision a **Spinnaker** development environment via **Terraform** on **AWS**, containing a fully-fledged Kubernetes cluster for test deployment. Reduced developer setup time from a full day to 10 minutes.
- Extended the collection of **Spinnaker** metrics by adding support for stage rollback events. Collected and visualized metrics using **Datadog** and created alerts for abnormal stage event behaviors.
- Created a secret manager container for **Hashicorp Vault** from the ground up using the sidecar pattern. Fully written in **Go**, it supports Auto-Auth via a **Kubernetes** service account token, fetching and auto refreshing Vault KV secrets, and generating **AWS STS** tokens.

TDS Telecom

Madison, WI

Software Engineering Intern

Sept 2019 – Oct 2020

- Addressed regular production bugs and improvements in enterprise **Java** applications using **JIRA** to prioritize tasks and utilized **CI/CD** pipelines for rapid development and deployment.
- Developed **Python** script that used the **ArcGIS API** to automate uploading service definition files to and from a remote server, increased upload speeds by 80%.
- Developed, refactored, and upgraded legacy **Perl** web applications and scripts on an Operations Support Systems (NetExpert) server, which interacted with internal **RESTful** services and **SQL** servers. Web applications used by more than 1,000 field technicians.

Juni Learning

Remote

Computer Science Instructor

Sept 2019 – Jan 2020

- Individually taught 8 students aged 8-16 **Scratch, Python, and Java** (AP Computer Science).
- Selected to be one of the few trial instructors to represent Juni Learning to prospective students. Successfully taught trial sessions resulting in more than 50% enrollment rate.
- Taught with a pedagogical philosophy based on project-based learning and praxis. Emphasized critical thinking and risk-taking during lessons by presenting myself as a knowledgeable collaborator rather than an source of infallible facts.

SKILLS

Programming Java, Python, Perl, C, MATLAB, SQL, Bash, Go, HTML, CSS, Javascript

Tools Terraform, AWS, Spinnaker, Git, JIRA, Jenkins, *nix, L^AT_EX

Languages English, Korean

Miscellaneous Red Cross Adult and Pediatric First Aid/CPR/AED Certification

AWARDS

- Language Flagship Scholarship, U.S. National Security Education Program 2021
- Foreign Language and Area Studies (FLAS) Fellowship, U.S. Department of Education 2020
- STEM Engagement, Altitude, Social Media Award, NASA Student Launch Initiative 2019
- 1st Place, Rocket for Schools Competition (cooperation with Gilroy and Ane Lab) 2018, 2019
- National Finalist, Team America Rocketry Challenge 2018