Daniel Ko

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Education

University of Wisconsin - Madison — Madison, WI

B.S. in Computer Science — *Expected Dec 2021*
3.9/4.0 Cumulative GPA

Professional Experience

Zendesk — Madison, WI
Software Engineering Intern — *Oct 2020 – Present*

- 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 and all of Spinnaker's microservices. Reduced developer setup time from a full day to 10 minutes.

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.

NASA 2019 Student Launch Initiative — Madison, WI
Chief Hardware Engineer — *Sept 2018 – June 2019*

- Developed full stack application for our project: *Measurement of Aerosols in Lower Atmosphere Using Optical Detection*.
- Included communication between payload and telemetry module to ground computer using a **XBee** module using serial communication. Ground computer had a **Python** backend which used SciPy and pandas to parse through and analyze telemetry and payload data. **Bootstrap** frontend for interactive dashboard with live 3D model tracking the gyroscope sensor.

Yu Lab (University of Wisconsin - Madison) — Madison, WI
Research Intern — *Feb 2018 – Sept 2018*

- Researched various genes in the *Aspergillus* genus and their effects on sporic life cycle.
- Inoculated various fungal cultures with target genes knocked out and performed western blot on those samples.

Skills

Programming Java, Python, Perl, C, MATLAB, SQL, Bash, HTML, CSS, Javascript
Tools Terraform, AWS, Spinnaker, Git, JIRA, Jenkins, *nix, LaTeX
Languages English, Korean
Miscellaneous Red Cross Adult and Pediatric First Aid/CPR/AED Certification

Awards

- Foreign Language and Area Studies (FLAS) Fellowship, U.S. Department of Education *2020*
- STEM Engagement Award (2nd), NASA Student Launch Initiative *2019*
- Altitude Award (3rd), NASA Student Launch Initiative *2019*
- Social Media Award (2rd) , 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*