SUNWOO KANG

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CORE SKILLS

Programming: Python, bash, Typescript/Javascript, html/css, Swift, C/C++, SQL
AWS services (EC2, VPN), Django, React, jQuery, ajax, NodeJS, Docker, Pyramid/Flask, Hadoop/Spark
Language: Korean (fluent), English (fluent), Mandarin (intermediate)

CAREER EXPERIENCE

Software Developer Engineer *March 2022 – Present*
Halo Machine Learning & Computer Vision team

- Build mobile applications for experimental need, help improving the Halo product and its customers
- Maintains ML platform used by scientists to build and improve ML models
- Shape customer product experiences with a direct impact on the architecture and implementation of main products, contributing industry-leading programming skills and object-oriented development knowledge

Bioinformatics Engineer, Invitae *June 2020 – March 2022*
Production software engineering team

- Python code owner for the mainline data transfer pipeline code repository
- Created new dashboard that involved developing flask backend APIs and dynamic frontend UI that has complex visualization plots.
- Interacted with IGVPool, Laboratory Information Management System (LIMS), Variant DB for developing new analysis tool
- Maintained web analysis toolkit by monitoring system through Grafana, New Relic, and Splunk
- Took part in pagerduty oncall duty to respond to 2-5/week P1 production incidents

Course Assistant, Stanford University *September 2020 – December 2020*
Assisted teaching CS145: Data Management and Data Systems

- Part of the teaching team for a course taught by Dr. Narayanan Shivakumar from Google BigQuery
- Contributed & managed assignments written in SQL and python and set in Google Colab environment

Software Intern at Genentech *June 2019 – September 2019*
Created web visualization for MS based proteomics

- Developed an interactive web visualization tool using typescript supporting multi-scale visualization
- Ran high throughput computation analysis through Spotfire, R, and SQL queries
- Selected for Genentech Leader Intern Exchange program (gLINX) and mentored by senior VP executive

Research Assistant at Stanford Medical Center *June 2017 – June 2020*
Developed research infrastructure for human metabolome analysis

- Developed data collection procedure for profiling human breath based metabolome using SIFT-MS
- Standardized data for developing biomarkers primarily using Principal Component Analysis (PCA) in python
- Implemented state of art machine learning algorithm based on ensemble classifier approach to predict subject genotype based solely on breath metabolome scan, boosting 95% accuracy

EDUCATION

Stanford University *September 2016-March 2021*
M.S. in Computer Science, concentration in Artificial Intelligence
B.S. in Biomedical Computation, concentration in Simulation
Korea Presidential Science Scholarship for Four Years

- Relevant Coursework: Artificial Intelligence: Principles and Techniques (CS221), Mining Massive Data Sets (CS246), Data Management and Data Systems (CS145), Design and Analysis of Algorithms (CS161), iOS Application Development (CS193P), Principles of Computer Systems (CS110)