Shawn Koo

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EDUCATION

UNVERSITY OF CALIFORNIA SAN DIEGO | BS
MATHEMATICS-COMPUTER SCIENCE
Graduation: June 2021

TECHNICAL SKILLS

PROGRAMMING
Java • C++ • Python • Swift • Matlab
ARM Assembly • JavaScript

SOFTWARE DEVELOPMENT
Data Structure• Algorithms• Scripting
Systems Design• Automation
Data Science • Machine Learning
iOS mobile development

TOOLS / FRAMEWORKS
Unix• Git• Micro-Processor
Micro-Controller • Node.js

COURSEWORK

COMPUTER SCIENCE
Recommender Systems and Web Mining
Theory of Computatability
Design and Analysis of Algorithms
Advanced Data Structures
Computer Organization and Systems
Unix Software and Version Control

MATHEMATICS
Enumerative Combinatorics
Statistical Methods
Intro to Numerical Analysis
Random Walks Algorithms
Intro to Mathematical Software
Mathematical Reasoning
Abstract Algebra

EXTRACURRICULAR

IEEE | ORGANIZATION MEMBER
Project Participant | WI 2020 - Present

DS3 | ORGANIZATION MEMBER
DataHacks 2020 | Feb 8, 2020

PROFESSIONAL EXPERIENCE

NAVSEA | SOFTWARE ENGINEERING INTERN
Automated Control System | Jun 2019 - Aug 2019
- Developed a prototype of an **automated test environment control system** to conduct **Surface Danger Zone Testing** for the **United States Marine Corps**
- Implemented a **wireless** main control program in **Python**, using **multithread** and **serial communication** to establish **two-way real time** data transfer
- Established **automatic real time calibration** and **real time data relay** between control, target mount and camera mount, using **C** on **micro-controllers**

PROJECT EXPERIENCE

MICROMOUSE | IEEE
Oct 2018 - May 2019 | Group member
- Was part of a team of five students to build a **self-navigating** mini car and specialized in **software implementation**
- Implemented **Flood Fill algorithm**, using **Java** in order to achieve self-navigation of the micromouse on a simulated grid
- Participated in design of the **PCB**, using **Eagle Cad** to draw **circuits**

UCSD NEWS APP | CODEPATH - IOS BOOT CAMP
Feb 2019 – May 2019 | Group member
- Was part of a group of three students to develop an **iOS** news **application** to highlight academic achievements of UCSD
- Participated in development of the main function of the application to make **url calls** to fetch news article to be displayed using **Swift**
- Designed the **flow control** of the application and participated in implementing of the **User Interface**

AI GAME ADVISORY | ADVANCED JAVA
Jan 2018 – March 2018 | Project Leader
- Worked on a project as a **leader** of a group of four students to implement a user interactive **AI** game advisor for blackjack
- Designed the main idea of the program, using known **probabilities** in blackjack to result better outcome. Used **Java** to implement the AI recommendation
- Participated in **GUI** development, using the **Java-FX** library along with the group members

STOP FOOD WASTE APP | IEEE
Jan 2020 - Mar 2020 | Backend Team Developer
- Just started **developing** an **android** application with a group of five students to track items in the **refrigerator** to prevent waste, using **JavaScript** and **node.js**

ADDITIONAL INFORMATION

- Interim **Confidential** level **security clearance** - **United States government**
- **Bilingual**(fluent in **English** and **Korean**)
- 10 years of experience in **hospitality**, **manufacturing industry** and **retail**
- Amateur **artist** - graphite illustration | **website under construction**

EMPLOYER REFERENCE

NAVSEA | STEFAN ENGLERT
stefan.englert@navy.mil | Branch Supervisor - NAVSEA Corona Det. Fallbrook