Leon Durrenberger

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EDUCATION

University of Southern California, Viterbi School of Engineering   *Aug 2018 - May 2022*
    Bachelor of Science in Computer Science   GPA: 3.737
    Recipient of USC Presidential Scholarship (half tuition) and the National Merit Scholarship

EXPERIENCE

Microsoft Devices - Remote / Seattle, WA   *May 2022 - Aug 2022*
Software Engineering Intern
- Designed and implemented system to automate detection of high power scenarios in devices
- Built and analyzed dataset from over 600 devices in testing & retail phases using **C# .NET** and KQL
- Collaborated with three teams to maximize benefit across Microsoft Devices and Experiences

Microsoft Devices - Remote / Seattle, WA   *May 2021 - Aug 2021*
Firmware Engineering Intern
- Automated suite of keyboard backlight tests for Surface Laptop line with **OpenCV** and **Python**
- Reduced time for test from 12 seconds to 4 seconds using host of computer vision techniques
- Created internal application using **Tkinter** to set configuration for varying keyboard layouts
- Designed scalable hardware testing system that will be deployed for use in production environment

University of Southern California - Los Angeles, CA   *Jan 2020 - present*
Course Producer - CSCI 356 (Computer Systems)
- Teaching course topics from computer organization, assembly, ROP, caching & memory allocation
- Hosting weekly office hours to answer student questions and debug **C** programs

Nexstream Technical Institute - Remote / San Diego, CA   *May 2020 - Aug 2020*
Content Creation & Web Development Intern
- Led development of curriculum plan for path of courses covering data mining, exploratory data analysis, **linear & logistic regression**, model evaluation, statistics, linear algebra, and **Tensorflow**
- In charge of lesson creation for entire course: Python Fundamentals for Machine Learning, covering linear algebra, **NumPy**, **Pandas**, **MatPlotLib**, and two regression projects in Google Colab
- Gathered requirements and created mockups in **Figma** for development of new home website

PROJECTS

USC Makers, Team Crani-Arm   *Aug 2021 - May 2022*
Software Team
- Used **Python**, **C++**, and **Arduino** to interpret EEG arm sensors to control a robotic hand
- Built **LSTM** with **Tensorflow** to analyze signal to generate discrete gesture detection
- Created testing framework utilizing **OpenCV** to label hand gestures during data collection

USC Makers, Team Makers Army   *Aug 2019 - Aug 2020*
Project Manager
- Chosen to lead the design and implementation of a **Bluetooth LE** controlled robotic arm using **C++**
- Managed fabrication of embedded wearable sleeve so user's arm motion is mimicked by robot

LEADERSHIP

USC Makers, E-Board   *Aug 2019 - May 2022*
President (2021-2022), Director of Membership (2020-2021), Associate Director of Programming (2019-2020)
- Led premier hardware organization through transition from remote to in-person work
- Managed 12-person board through weekly meetings for 90-person organization
- Created and led tutorials for USC community on **Raspberry Pi**, **Arduino**, PCB design, and CAD

SKILLS

Fluent in C++, Python; coursework in ML, IoT, OS, Robotics, Web Development, Game Development