

Dilraj Devgun

dilrajsinghdevgun@gmail.com | (425) 279 3444

github: github.com/thejarlid | portfolio: thejarlid.github.io

EXPERIENCE

Software Engineer (HoloLens Firmware and Drivers Systems Team)

Microsoft | Redmond, WA | Aug 2019 - Present

- Developed firmware for the SoC and HPU which is a custom ASIC for the HoloLens, government IVAS project, and future VR/AR devices
- Helped integrate sensors, write drivers, and provide higher level APIs for consumers such as the Calibration, Tracking, and Vision teams
- Tripled frame rate for IVAS cameras by implementing a shared memory buffer pool library allowing us to outperform our existing customer benchmarks
- Inherited ownership and developed a set of internal C++ tools used to record sensor data in a custom binary file format alongside features to analyze, repair, and replay the data, thus providing a way for teams throughout the HoloLens stack to verify their work and focus on improving the quality of our vision algorithms

Software Engineering Intern (Universal Store Team)

Microsoft | Redmond, WA | Jun 2018 - Aug 2018

- Developed an Azure hosted web application to model service architectures using .NET Core, Angular, and C#
- Eliminated overhead for teams to manage service subscription by building a portal for other teams to manage their own resources

Operating System and Hypervisor Researcher

University of Washington CSE | Seattle, WA | Jan 2018 - Jan 2019

- Worked alongside Professor Tom Anderson to extend a Unix Operating System into a hypervisor that supports multiple paravirtualized guest OSes
- Designed and implemented a user-level thread system and privileged system calls to securely allow for one user level process to manage another user-level's pages

iOS Engineer

Freelance & Independent | Seattle, WA | Jun 2014 - Present

- Designed and implemented a mobile app which Apple featured on the App Store as Best New App in Germany, Sweden and Austria
- Built a 3D model presentation tool using ARKit for designers at Vossler Media to provide engaging demonstrations of their work to their clients
- Decreased stroke patient screening time by >90% using an on-device decision tree on patient information to determine research trial eligibility
- Currently working on a cross platform productivity application <https://merakiapp.co>

EDUCATION

University of Washington

Seattle | Aug 2015 - Jun 2019

Bachelor of Arts and Science

Computer Science

GPA: 3.75

AWARDS

Best New App Feature by Apple
Annual Dean's List ('16, '18, '19)

TEACHING

CSE 451 Operating Systems

CSE 143 Intro. to CS

PROJECTS

Citrus Motivational Task Manager (iOS)
L1 Optimal Path Video Stabilizer (Python)
Image Processing Library (C/C++)
Panorama Stitching (C/C++)
Paxos Key/Value Store (Java)
Meraki (iOS, Desktop, Web, Backend)

PROGRAMMING SKILLS

C/C++
iOS Development
Swift
Objective-C
Java
C#
Python
Embedded Systems
Firmware and Driver Development
Operating Systems
Systems Development
Web Development
ML/AI/CV Fundamentals