Maxime Alexander Sutters

CONTACT INFORMATION

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EXPERIENCE

Amazon Web Services (AWS), Seattle/Bellevue, Washington USA
Software Development Engineer Apprentice **June, 2022 - April, 2024**

- Developed feature with Python, GraphQL, SQL, and Java for automation of datacenter security tasks through work assignments API accessed by contract guard force and site security management. Implemented localization by physical site and logical availability zone and covered geographical and governmental edge cases. Collaborated across two teams to deliver prototype to customers.
- Maintained computer vision and machine learning processing of petabytes of HLS video frames.
- Updated legacy code with new GraphQL API calls and SQL queries to Amazon Redshift databases.
- Built CloudWatch metrics, dashboards, and alarms to parse logs and monitor automated DJS job and AWS Lambda health and performance.
- Created and monitored CI/CD pipelines, AWS accounts, and Apollo environments for team code deployment.

EDUCATION

University of Washington, Seattle, Washington USA
Paul G. Allen School of Computer Science & Engineering

B.S., Computer Engineering, December 2021
Selected Courses: Networks, Systems, Digital Design, Compilers, Data Structures and Parallelism

TECHNICAL SKILLS

Languages: Python, Java, Javascript, C/C++, Bash, HDL, SystemVerilog, Verilog, SQL, JSON, assembly
Tools: Quartus, ModelSim, GDB, Vim, Git/GitLab, IDEA, KiCad, LaTeX, Mathematica
Algorithm projects: Spam filter using machine learning (Naive Bayes), KD-tree nearest neighbor finder, content-aware image resizing with A* graph search
Operating Systems: Unix/Linux (AL2, WSL), Windows
Hardware: PCB design, 3D printing, flashing of Arduino/STM32 chips, SMD soldering
Frameworks: AWS: Lambda, API Gateway, Secrets Manager, GraphQL, S3, DynamoDB, Athena, Code Pipelines

PROGRAMMING PROJECTS

GuitXR: `https://uwrealitylab.github.io/xrcapstone21sp-team4/`

- AR guitar learning application for the Magic Leap headset with floating chords and tabs, instrument-mounted controls, and real-time pitch detection
- Built in Javascript and HTML via the WebXR API and A-Frame web framework
- Refactored ML5.js-based pitch recognition library for guitar
- Presented completed VR capstone demo at the University of Washington Reality Lab

N-Car Parking Garage Simulator

- Designed and programmed finite state machine (FSM) logic in SystemVerilog for two presence sensors at the gate of a simulated parking garage and an n-bit counter to track available spots
- Simulated functionality of hardware devices (LEDs, seven-segment displays, buttons, and switches) in ModelSim before flashing to the Altera DE1_SoC FPGA board using Quartus