

Noah Driker

ndriker@uci.edu | (858) 284-9091 | San Diego, California

WORK EXPERIENCE

Software Engineering Intern @ Positioning Universal – San Diego, CA

Sept 2020 – Present

Goal: Collect and accelerate vehicle-bus data collection for OBD2 Diagnostic and GPS Tool

Process:

- Collected vehicle-specific parameters over CAN, LIN, and KWP2000 embedded protocols for over 200 consumer and commercial vehicles
- Developed a command-line tool that improves data collection speed by 2x
- Extracted information on relevant vehicles from our vehicle partners, using a targeted web-scraper
- Built an automated comparator/filter to classify vehicles

Software Engineer @ Craitor – San Diego, CA

June 2019 – Dec 2019

Goal: Devise method for compression of raw point cloud data for military low-bandwidth transmission of 3D scans

Process:

- Improved data compression 7x using DCT as our compression method
- Designed 3D reconstruction method using Bézier and B-Spline curves

SKILLS & PROJECTS

Programming Languages: C++/C/C#, Python (NumPy, SciPy, Matplotlib, PyTorch, OpenCV), R, Java, HTML5, JavaScript

Other: MATLAB, RISC-V Assembly, Verilog, MySQL, Microsoft Office, Tableau, LaTeX

Simulated File System using Emulated Hard Disk

Goal: Develop a File System using an Emulated Disk

Process:

- Implemented static size structure for disk storage and low-level disk operations to emulate disk
- Created Unix-like file system structures using emulated disk operations
- Built a shell to access the created file system

Search Engine for Web and Scholarly documents

Goal: Retrieve and index information from Web pages and scholarly documents

Process:

- Wrote a web-crawler capable of trap avoidance and duplicate detection using Similarity Hash method
- Applied NLP to tokenize text into queries for page and document indexing
- Implemented Inverted Index Matrix to map queries to locations within pages
- Designed indexer to offload hash map of inverted index matrix to disk, to handle limited memory constraints
- Completed a search engine capable of handling tens of thousands of documents, under harsh operational constraints and having a query response time under 300ms

Design of Functioning MIPS Processor

Goal: Design a RISC processor

Process:

- Wrote structured, multi-module hardware models for processor components in Verilog
- Tested DUT with a custom, exhaustive testbench
- Analyzed waveforms for accuracy and efficiency

EDUCATION

University of California, Irvine

Sept 2017 – Present

Pursuing BS in Applied Physics & Minor in CS

Relevant Coursework

CS 143: Principles of Operating Systems

CS 121: Information Retrieval

EECS 112: Organization of Digital Computers

Math 162: Differential Geometry

Math 130: Probability and Stochastic Processes

Math 13: Abstract Mathematics

Activities: Artificial Intelligence @ UCI, Hedge Fund Society UCI

Extracurriculars: Raspberry Pi Projects, Club Fencing, Poker

Other Skills: Focused, fast learner, great communication and problem-solving skills

Status: U.S. Citizen