NICHOLAS HAUSCH

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An enthusiastic and detail-oriented engineer. Highly proficient in database management systems, web and native app development, algorithms, and data analysis. Good at working in fast-paced teams and delivering clean, reliable code.

WORK EXPERIENCE

Apple, Cupertino, CA
Software Engineer | October 2021 – Present

- Designed systems and frameworks for iOS native graphics rendering. Developed aesthetic and realistic 3D scenes and animations. (Swift)
- Implemented calculations for lighting, shading, and occlusion based culling. (Metal)
- Created clean and flexible mobile application interfaces, allowing for seamless interaction with multiple visualization tools. (SwiftUI)

XPeng Motors, Mountain View, CA
Software Engineer | July 2018 – September 2021

- Developed data streams and algorithms for embedded autonomous driving software, using the RTI Connext DDS communication platform. (C++)
- Implemented KPIs and unit tests to ensure quality data outputs. (Google Test, Google Logging, C++, Python)
- Designed a robust web visualization tool, which helped enable large scale simulation testing. (React, Three JS)
- Wrote scripts and optimized dependencies for efficient compilation for both Linux and QNX operating systems. (Docker, CMake, Bazel, Shell)

EDUCATION

UC Davis
Fall 2014 – Spring 2018

- Applied Mathematics BS, minor in Computer Science

PROJECTS

Clustering Visualizer

- A tool for visualizing the clustering algorithms such as k-means, mean-shift, and DBSCAN.
- Contains several datasets and has adjustable parameters. Implemented using Vue and SVG, see link above.

Independent Mathematics Research

- Developed an algorithm for finding channels within time series data.
- Created a framework for modeling stock trades using Poisson point processes.

ADDITIONAL INFORMATION

Good with Photoshop and design tools such as Draw.io
Fluent in Mandarin Chinese (written and spoken), proficient in Spanish

REFERENCES

Available upon request