Andrew Hartwell

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Education

University of California, Santa Cruz Sep. 2016 – June 2020

Bachelor's of Science in Computer Science | Honors in the Major (3.55 GPA) *Santa Cruz, CA*

- Educational Opportunities Program Honors Student
- Dean's Honors Student Fall 2019, Winter 2019, Winter 2020, Spring 2020
- Slug Gaming Overwatch Team Captain
- **Relevant Coursework:** Software Engineering, Analysis of Algorithms, Data Structures, Advanced Programming, Distributed Systems, Computer System Design

Experience

SAP, Software Engineer Intern Jan. 2020 – June 2020

University of California, Santa Cruz *Santa Cruz, CA*

- Collaborated with Intel and SAP to expand upon accelerating key in-memory database functionality.
- Utilized OpenCL/C++ to interface with a FPGA allowing for targeted performance improvement.
- Optimized delta merge process by incorportating pipeline parallelism, resulting in 66% speedup.
- Extensively documented the project tasks and progression as acting Scrum Master.

Projects

Personal Website: arhartwe.github.io (for additional information and projects)

Fault-Tolerant Key-Value Store | *Python, Flask, Docker, Git*

- Launched a Python 3.7 REST API of a distributed key-value store using Flask framework.
- Instituted sharded key-value distribution that can operate on thousands of keys simultaneously.
- Improved the functionality by providing causally consistent key insertion.
- Delegated crucial key re-sharding functionality that resulted in significant performance increase.

Woo Healthcare Application | *JavaScript, React Native, Expo, FireBase Git*

- Developed a phone application that followed Agile best practices and Scrum methodology.
- Expedited appointment scheduling, medical record viewing and prescription distribution.
- Employed React Native which provided responsive user experience on Android and iOS.
- Proposed and integrated Firebase Firestore for handling of user data to provide real-time storage.

Pokemon Battle Prediction | *Python, Google Colab*

- Conceived a machine learning project that predicted the winner of a Pokémon battle.
- Outperformed Kaggle competition winner by introducing a neural network.
- Achieved battle winner classification accuracy of 95.1%.

QuickTrip | *Java, Android Studio, Bitbucket*

- Deployed Android list sharing application on Google Play store.
- Incorporated notification system that enhanced user experience by reducing the need to monitor lists.
- Inspired from struggling to find an application targeted at expediting shopping for large households.

Technical Skills

Languages: Java, Python, C/C++, JavaScript, SQL (Postgres), MongoDB, HTML/CSS
Frameworks: React Native, Node.js, Flask
Developer Tools: Git, Docker, Expo, Virtual Box, Android Studio, Visual Studio Code