sarah pan

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education

PRINCETON UNIVERSITY ***Princeton, NJ (May 2019)***
B.S.E. COMPUTER SCIENCE · GPA: 3.47

Relevant Coursework: Algorithms and Data Structures; Information Security; Computational Reasoning; Systems; Circuit Logic Design

Honors: Rewriting the Code Fellow / Ambassador *2017 – present*; Yext Grace Hopper Scholarship *2017*; 1st place in the International Eye Photo Contest *2017*; Mary W. George Research Conference *2016*; NCWIT Aspirations in Computing Affiliate Runner-Up *2015*

experience

GOOGLE *June 2018 – August 2018*
SOFTWARE ENGINEERING INTERN

- Expanded major features and data functionalities for Google Analytics, including the horizontal numeric axis class, dynamic rendering of charts, support for multiple series, and visual descriptors for the publicly-facing Ads platform.
- Designed and implemented the scatter plot visualization, one of seven primary data representations on Google Analytics. Deployed on the Advanced Analytics (Vero) interface and developed with Javascript, D3, and Angular.
- Improved the efficiency of data rendering and reusability of modules by refactoring code within the internal visualizations library.
- Rebuilt user interactions for Vero by implementing Delaunay triangulation on sets of two-dimensional data points. Introduced Voronoi tessellations, partitioning visualization data into equidistant spatial regions to improve the efficiency of data selection.

TIMESCALEDB *May 2017 – August 2017*
SOFTWARE ENGINEERING / DATA SCIENCE INTERN

- Authored an analysis/tutorial on TimescaleDB functionalities and PostgreSQL queries using 1200+ cryptocurrency datasets. Developed charts for analysis using ggplot2 in R. Reached #1 on HackerNews, 130k+ views, and 1k+ recommends on Medium.
- Researched and developed an aggregate PostgreSQL function in C for Timescale's scalable, time-series database extension. Currently deployed in Timescale's consumer-facing extension serving clients such as Bloomberg, Comcast, and Ubisoft.

PRINCETON SOCIAL NEUROSCIENCE LAB *September 2016 – May 2017*
SOFTWARE ENGINEER / RESEARCH ASSISTANT

- Wrote and implemented Python scripts using Python's Beautiful Soup package to conduct web scraping of social media platforms, track trends in human sharing, and analyze behaviors of online personas.
- Oversaw fMRI scans for neuroimaging of participants in a behavioral study analyzing the effects of social isolation on humans.

projects and involvements

YAKSTACK – Built front-end and back-end modules to support anonymous posting and voting, coin exchange, blockchain authentication, and namespace registration on a decentralized iteration of YikYak (an anonymous social platform).
– Implemented on the blockchain via Blockstack's decentralized internet, developed with Vue.js and Firebase.

COMET – Designed UI and front-end timing modules for a native productivity app on Android and iOS devices.
– Developed with Javascript, React Native, and Firebase.

DESIGN / PHOTOGRAPHY Designer for the *Student Design Agency* · Freelancer for student organizations (e.g. *Old NasSoul*, *BodyHype*, *Community Service Initiative Committee*) · Layout Editor for *Princeton Traveler* · Photographer for the *Daily Princetonian*

ENTREPRENEURSHIP CLUB Officer for *HackPrinceton*'s Experience team · Co-director of the Careers team · Officer for the Design team · Professional Development Lead Associate for *The Princeton Startup Immersion Program*

BACKPACKING Orientation leader for *Princeton Outdoor Action (OA)* **DANCING** Member of *Princeton Raqs Belly Dance Troupe*

skills

PROGRAMMING SKILLS Proficient in Java and Python; Familiar with C, C++, Javascript, D3, Angular, PostgreSQL, Matlab, R
VISUAL DESIGN SKILLS Illustrator, Photoshop, InDesign, Autodesk Inventor 3D CAD, Wireframing & UI Prototyping