Sonja Xuan Johanson – UC Berkeley Junior

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UC Berkeley, CA – Bachelor of Arts, Computer Science, 3.65 GPA **May 2023**

Skills: *Java, TypeScript, React & Python (highly proficient), C, R, Matlab, French & Spanish (fluent)*

Work Experience

Lawrence Livermore National Laboratory (LLNL)

– *Cyber and Infrastructure Resilience Intern* **6/2021 — present**

- Software developer for two projects on US power grid and communication network resilience, with networking and security tool development focus. **[Python, JavaScript, Java]**

Blueprint, Technology for Non-Profits

– *VP of Technology* **5/2021 — present**

- Produce and manage the Fall 2021 technical challenge for recruitment. Onboard and teach 10 new developers Blueprint's stack. **[Typescript, React, Node, PostgreSQL, Prisma, Airtable]**
- Manage and mentor 4 technical leads for the Fall 2021 software projects.
- Liaise with Berkeley multiracial-focused orgs to increase diversity recruitment.

– *Full-Stack Web Developer* **8/2020 — 5/2021**

- Collaborated with 5 developers and designer to build a web app for the National Black Justice Coalition, a civil rights org dedicated to empowering Black LGBTQ people.
- Built frontend dashboards and backend functionality. **[React, Typescript, PostgreSQL, Prisma]**

Portland State University Performance Computing lab

– *High Performance Computing (HPC) Research Intern* **6/2020 — 11/2020**

- Scripted applications in C's parallel computing library (MPI) to test Dr. Karen Karavanic's new performance measurement tool for (HPC) workflows. **[C, AWS, Docker, Neo4j]**

– *Cybersecurity Research Intern* **6/2017 — 9/2017**

- Developed a Python simulator to test scheduling algorithms as part of a Research Experience for Undergraduate summer internship from Computing Research Association-Women. **[Python]**
- Article on my contribution to the NSF-funded cybersecurity project: Extensible, Performance Aware Runtime Integrity Measurement Mechanism (EPA-RIMM).

Projects

Escape the Asteroids – 2D Java game with the objective of building an escape pod before asteroids destroy your world! Video demo here. **12/2020**

Philphix – Text replacement tool implemented in C using a hash table. **2/2021**

Numc – Built a custom version of numpy in C that offers parallelized matrix operations. **4/2021**

Cats – Python program that measures typing speed (for racing) and supports autocorrect. **4/2020**

Interests & Volunteering

UC Berkeley, Computer Science Mentors – *Data Structures Tutor* **1/2021 — present**

- Led a weekly section of 5 students covering data structures, algorithms, and graphs.
- Coached "CS discoverers" to increase their confidence in computing at Berkeley.

International Federation of Sport Climbing – *World Youth Semi-Finalist* **2015, '16, '17**

Documentary on world class female climbers, *Pretty Strong* – *Film Editor* **2019**

July 2021