Shaohua(Shirley) Chen

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Education

- **UC Berkeley** — Berkeley, CA
  B.A. Computer Science; GPA: 3.769 — *June 2021 - May 2024*
  Courses: *Data Structures, Algorithms, Computer Architecture, Operating System, User Interface, Computer Security, iOS Development, Data Science, Linear ALgebra and Circuits, Discrete Math*

Skills Summary

- **Languages**: Python, Java, C, JavaScript, HTML/CSS, RISC-V Assembly, Intel Intrinsics, SQL, Swift, Scheme
- **Tools**: Git, Figma, NumPy, Photoshop, iMovie
- **Other**: Mandarin, Cantonese, Korean (elementary level)

Experience

- **UC Berkeley EECS Course Staff** — Berkeley, CA
  CS61B(Data Structures) 20-hr TA/uGSI · Academic Intern — *Dec 2021 - Present*
  - **Hold daily 3-hour labs**: Prepare and review course content and supplemental material to support 30+ students in lab sections.
  - **Office Hours**: Answer questions about various data structures, projects debugging, homeworks, and labs.
  - **Teach various data structures**: BST, Linked List, Heap, Graph Algorithms, Hash Table, etc.
- **Google Software Produce Sprint (SPS)** — Remote
  Participant — *May 2022 - August 2022*
  - **Teamwork**: Collaborated with a team of peers to design and implement web applications using Java, Javascript, HTML, and CSS over the course of 10 weeks, leveraging various Google Cloud Platform APIs, including App Engine and Datastore.
  - **Career Development**: Practiced industry best practices such as: contributing to open source software using Git and Github, conducting code reviews, participating in distributed development, designing new components and interfaces and leading them to completion.
- **UC Berkeley Visiting Scholar and Postdoc Affairs (VSPA)** — Berkeley, CA
  Program Assistant — *August 2021 - December 2021*
  - **Appointment Management**: Managed the appointment process for postdocs and visiting researchers through the online system.
  - **Email Auditing**: Audited past scholars' visits and checked email inboxes on a daily basis.
- **Community Youth Center(CYCSF)** — San Francisco, CA
  Program Assistant — *June 2021 - August 2021*
  - **Virtual CS worksite**: Coordinated virtual CS worksite to provide opportunities for participants to learn and practice coding
  - **Training**: Planned biweekly 2-hour virtual training for 10+ Counselors-in-Training
  - **Check-ins**: Held weekly check ins with participants to answer questions about weekly CS projects and assignments

Projects

- **Pawminder**: A dog tracking app for dog owners which allows health tracking, activity tracking, and diet tracking, using **Node.js**'s express module for backend, and **React** for the front end.
- **PetConnect**: A web application where you can list your pet for adoption and find pets to adopt. **Google datastore** was used to store all the real-time entities and **HTML/CSS/Javascript** were used to fetch and display.
- **Gitlet**: A version-control system in **Java** that mimics some of the basic features of the popular system Git. The main functionalities that Gitlet supports include: Stage, Commit, Merge, Push, Pull, Checkout, etc.
- **CPU**: A 5-stage pipelined CPU with datapath, control logic, and memory fully implemented in **Logisim** following the RISC-V 32-bit ISA.
- **NumC**: A NumPy library clone in **C** using **SIMD** and **MIMD** to accelerate matrix operations, with frameworks such as **Intel AVX Intrinsics** and **OpenMP**, as well as optimizations with caches and virtual memory.
- **Classify**: **RISC-V Assembly** code to classify handwritten digits with a simple machine learning algorithm.