CYNTHIA CHANG

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Recent CS graduate of **top-tier university** with strong technical, analytical and interpersonal skills. Experienced and extensively educated in **object-oriented programming**, designing, developing and debugging code. Self-motivated, communicative and proactive with a positive, growth mindset. **Effective time management**, **project management** and multi-tasking capabilities. Looking forward to leveraging my skills in a **collaborative** environment.

EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY || *Berkeley CA* **2016-2020**

- Bachelor of Arts in **Computer Science**
- *Relevant Coursework:* Computer Graphics | Artificial Intelligence | Machine Learning | Database Systems | Data Structures | Principles & Techniques of Data Science | Computer Security | Efficient Algorithms & Intractable Problems

EXPERIENCE

1. Functioned as key member in developing a **compact Minecraft shader program** in OpenGLSL.
   - Implemented the **Blinn-Phong** shading model from sampled environment textures, determined light position over time for specular calculations; produced **real-time renderings** of water reflections.
   - Constructed water waves using a sum of sine functions on vertex data over time.
   - Used: OpenGL Shading Language, Atom, Optifine 1.14, Minecraft 1.14
2. Developed an **AI-based Pacman** with intelligent game agents.
   - Implemented BFS, DFS, A* and Greedy algorithms for efficient multi-agent path-finding.
   - Utilized belief/weight distributions to implement Bayes' Nets probabilities for particle location inference.
   - Used: Sublime Text 3, Python 3, PyCharm
3. Implemented a **two-layer Feed-Forward Neural Network** to train and predict on various data sets.
   - Implemented both foward-/backward-propagation methods for ReLU, Softmax, Tanh functions, and cross-entropy and L2 losses. Developed both **fully-connected and Elman** layers.
   - Achieved 96%+ accuracy on Iris dataset with fully-connected layers, ~80% accuracy on a sinewave dataset using an Elman layer.
   - Used: Python 3, Sublime Text 3
4. Designed a **local version control** tool based on Git.
   - Implemented efficient file **push, pull, deletion, and merge** features, complete with branching mechanisms such as tracking, switching, merging, and deleting.
   - Utilized the SHA-256 file encryption method. Efficiently stored and retrieved files within a **tree-structured linked list**. Tested code throughout process with self-written **JUnit** tests.
   - Used: Java, IntelliJ IDE, JUnit
5. Developed a **grouping program** for UC Berkeley New Student Services to streamline sorting 1000+ students.
   - Leveraged the Python **Pandas Dataframe** mechanisms to efficiently manipulate data into groups with optimal statistics as predefined by supervisor. Reduced manual grouping efforts from hours to seconds.
   - Used: Python Pandas, Jupyter Notebook, Sublime Text 3

U.C. BERKELEY NEW STUDENT SERVICES || *Berkeley, CA* **Sept. 2018 – Sept. 2019**

Student Coordinator

- Co-lead the recruitment, retention, training, and appreciation of all 500+ student leaders. Created student engagement and advertising methods. I**ncreased application and retention rates** by over 20% from previous year.
- Served as project lead for organizing 7 off-campus excursions. Designed a cohesive template for 140+ unique itineraries. **Person in charge for all communication** between venues, student leaders, and volunteers during event.
- Previously Orientation Mentor (2018) and Orientation Leader (2018)

SKILLS & INTERESTS

Technical: Java, Python – Numpy, Pandas, C/C++, SQL, HTML/CSS, PHP
Environments Used: Ubuntu 18.04, Jupyter Notebook, PyCharm/CLion/IntelliJ IDEs, Sublime Text, Atom
Languages: Mandarin Chinese, French (Elementary)
Interests: Bouldering, Bullet Journals, Classical Piano, Horticulture, Jigsaw Puzzles, Urban Dance