

Yu-Hsi (Ellie) Cheng

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EDUCATION

University of California, Los Angeles (UCLA)

Expected June 2022

Bachelor of Science in Computer Science and Engineering

- **Relevant Coursework:** Data Structures, Algorithms & Complexity, Artificial Intelligence, Operating Systems Principles, Programming Languages, Probabilistic Programming & Relational Learning, Data Mining, Machine Learning
- **Honors:** Upsilon Pi Epsilon, Dean's Honors (Fall '18, Winter '19, Spring '19, Fall '19, Spring '20, Fall '20, Winter '21)
- **GPA:** 3.991

TECHNICAL SKILLS

- Programming languages: C/C++, Python, PHP, SQL, OCaml, HTML, CSS, JavaScript
- Frameworks/Tools: React.js, Express.js, Node.js, Flask, Docker, Git, MongoDB, Firebase, Keras

PUBLICATIONS

- Jeya Vikranth Jeyakumar, Joseph Noor, **Yu-Hsi Cheng**, Luis Garcia, and Mani Srivastava. How Can I Explain This to You? An Empirical Study of Deep Neural Network Explanation Methods, NeurIPS 2020.

EXPERIENCE

Networked & Embedded Systems Lab, UCLA

October 2019 – Present

Undergraduate Research Assistant

- Working on **XAI** (explainable AI) projects for Deep Neural Networks for classification tasks using **Python** with **Keras**

Statistical and Relational Artificial Intelligence Lab, UCLA

January 2020 – Present

Undergraduate Research Assistant

- Developing optimizations for the probabilistic programming language **Dice** in **OCaml** based on traditional compiler optimizations to reduce programs' compilation size and inference runtime

Facebook, Inc.

June 2020 – September 2020

Software Engineering Intern

- Worked on improving ranking systems and recommendation infrastructure for Facebook Events notifications aimed at growing the Events product using primarily **Hack (PHP)** and **SQL**

ACM Cyber, UCLA

October 2018 – Present

Co-President

- Leads officer team on creating workshops for novices interested in **cybersecurity** at UCLA
- Created Capture the Flag questions in topics like cryptography and reverse engineering and websites for workshops using **Flask**, **Python**, **Docker**, **Rust**, **PostgreSQL**

PROJECTS

Probabilistic Graphic Generator 2020

April 2020 – June 2020

- Created a graphic generator that can produce aesthetic minimalist graphics of new and unique colorings given an arbitrary image in a team of four using **K-means**, **probabilistic factor graphs**, and **MCMC sampling**

MeetMe

December 2019 – January 2020

- Developed an event scheduler heavily inspired by When2Meet using **React.js**, **Express.js**, and **Firebase**, with emphasis on user friendly UI/UX on both desktop and mobile

Aetla

June 2019 – October 2019

- Designed and developed a course-planning web application using **React.js**, **Express.js**, and **Node.js** for UCLA students to efficiently and conveniently plan their curriculum
- Built all the **frontend** features, including a planner page with drag and drop course cards and course search functions
- Designed and implemented **backend API** that queries **MongoDB Atlas** database to feed planner with users', courses' and plans' data, utilized **Firebase Authentication**, and connected backend with frontend