CHRISTOPHER CHOU

christopherchou@berkeley.edu | 5103580455
www.linkedin.com/in/cchou03 | babychousr

EDUCATION

UC Berkeley Management, Entrepreneurship, & Technology (M.E.T.) Program — Aug. 2021 to May 2025
B.S. Electrical Engineering & Computer Science, Business Administration

Washington High School — Aug. 2017 to May 2021
Relevant Coursework: Multivariable Calculus, Linear Algebra, Discrete Math, Differential Equations, Digital Design Fundamentals, Intermediate Software Design in C++, Javascript for Programmers, Presentation Techniques in Research, Intro to Research Techniques

EXPERIENCE

UNIVERSITY OF CALIFORNIA, SANTA BARBARA — Santa Barbara, California
Student Researcher — June 2020 to Aug. 2020

- Developed a computational simulation using Kwant package to simulate electronic transport in Dirac semimetals, analyzed electronic transport data using Numpy, Pandas, and Matplotlib and designed topological nanoelectronics
- Best poster at the 9th Conference on Materials Science & Engineering, published in IOPScience Journal of Physics

THE EMBER INITIATIVE — Fremont, California
Operations Lead — Jan. 2019 to Current

- 501(c)(3) non-profit that holds classes at libraries and online, bringing technical education for over 300 underprivileged Bay Area students
- Raised over $5000 through fundraising campaigns with Bay Area Title One Schools, Rexav LLP, BlackRock, and GoFundMe
- Developed the full-stack web application using Flask and Firebase which hosts teaching material on data analysis and introductory machine learning

PSIHACKS — Fremont, California
Executive Director — July 2020 to Oct. 2020

- Organized a two-day virtual, global hackathon to inspire students to innovate new applications that incentivize distance learning
- Attracted 16 corporate sponsors, over $20,000, 12 mentors and judges, and 200 participants through cold calling and social media marketing

PROJECTS

HIGH-RESOLUTION CLIMATE CHANGE PROJECTIONS GENERATOR — Aug. 2020 to Mar. 2021

- Developed a Convolutional LSTM Neural Network with Tensorflow to statistically downscale monthly precipitation data in China from an Earth System Output with coarse-resolution of (2.5 x 2) to a fine-resolution of (0.25 x 0.25), improved R-squared by 0.354 from CNN baseline
- Published in 2021 IEEE 13th International Conference on Advanced Computational Intelligence and invited to the SCI-journal Special Issue of Computational Intelligence and Neuroscience on "Interpretation of Machine Learning: Prediction, Representation, Modeling, and Visualization"

GLASS-EPOXY LAMINATED COMPOSITES OPTIMIZATION TOOL — Dec. 2019 to Feb. 2021

- Programmed more ecient and accurate optimization tool for composite materials using First-order Shear Deformation Theory and Higher-order Finite Element Method on MATLAB; Characterized and Investigated potential applications of Glass-Epoxy structure using the optimization tool
- Published in 2021 IEEE 12th International Conference on Mechanical and Intelligent Manufacturing Technologies

STOCK CLOSING PRICE PREDICTOR — Sept. 2020 to Jan. 2021

- Developed a Bidirectional LSTM with GloVe word embeddings to predict tweet sentiment & programmed a stockmarket forecasting model utilizing sentiment analysis and attention mechanism to forecast AAPL (increased R-squared by over 10% over LSTM)
- Published in 2021 IEEE 5th Advanced Information Technology, Electronic and Automation Control Conference

PICTURE PERFECT — Jan. 2021

- Developed an application that assists presenters by detecting their engagement using CoreML and analyzing their speech using Google Text-to-Speech. Developed web-app with similar capabilities using FaceAPI, Videojs, RecordRTC, and served frontend with React
- Won 1st Place and Most Entrepreneurial Hack at Hackdemonium, a global virtual hackathon with 205 participants

BREAD AND BUTTER — June 2020

- Developed a web application for users to promote and order from restaurants where portions of revenue are donated to activist organizations
- Programmed secure checkouts using Stripe API, restaurant recommendation engine using word2vec, and user authentication/post features using AWS
- Won 2nd Place at Epsilon Hacks, a global virtual hackathon with 253 participants

FOOD FOR THOUGHT — Nov. 2019

- Developed a web-app where users could discover harmful ingredients in their food by taking a photo of food label which uses Django for the website, Google Cloud Vision for OCR, and BeautifulSoup to find nutritional facts
- Won 2nd Place at SigmaHacks, a hackathon in Fremont, CA with over 100 participants

EXTRACURRICULARS, AWARDS, & SKILLS

LANGUAGES/TECHNOLOGIES: Java, Python, C/C++, Javascript, HTML/CSS, R, React, Node.js, Firebase, Flask, Tensorflow, Google Cloud
AWARDS: USACO Gold, Six-time Hackathon winner, 1st Place in NorCal DECA for Principles of Finance, National Merit Finalist, National AP Scholar
ACTIVITIES: IEEE Conference Peer-Reviewer, WHS Data Science Club President, Taekwondo Competitor, DECA, Kaggle Competitions Contributor