MATTHEW LEE

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EDUCATION

University of California, Berkeley   **Expected June 2025**
BA, Computer Science + BA, Data Science
- GPA: 4.0
- Regents' and Chancellor's Scholarship, Cal Alumni Association Leadership Award Scholarship

Relevant coursework: Discrete Mathematics, Calculus, Introduction to Business

EXPERIENCE

Hack+   **Fremont, California**
Software Engineering Intern   June 2021 - Present
- Hack+ supports organizations and events with legal backend, banking services, equipment, and more.
- Developing a revamped online portal using React, Node.js, and Firebase to provide organizations with a centralized access point for services, transaction records, invoice management, and member coordination.
- Engineering an automated process for more efficient approval and onboarding of Hack+ applicants.

University of California, Santa Barbara   **Santa Barbara, California**
Student Researcher   May 2020 - Aug. 2020
- Architected a convolutional neural network EEG-based authentication system with P300 event-related potential as input by using PyTorch and Jupyter Notebooks; assessed efficacy with Numpy and Matplotlib.
- Examined methods to reduce input noise and impact of environmental factors on system performance.
- Compiled poster, presentation, and manuscript for inclusion into the RMP Program Symposium.

California Institute of Technology   **Pasadena, California**
Student Researcher   Aug 2019 - May. 2020
- Studied algorithms and theory behind fundamental concepts in network theory under the Hassibi Group.
- Designed and built a website using React and Firebase to collect crowdsourced data on strawberry breed classification and tested performance of different clustering algorithms using MATLAB.

TitanHacks   **San Marino, California**
Operational Director   Oct. 2019 - May 2021
- 501(c)(3) non-profit that teaches programming foundations and thinking to over 40 Pasadena area youth.
- Developed a website with React and Node.js to facilitate meeting attendance and project submission.
- Raised $8000 worth of event and program sponsorships from organizations like GitHub, AWS, and HyperX.

PROJECTS

- **Book Rank Predictor** - *Scikit-learn, Pandas.* A random forest model that utilizes the metadata of a book (i.e. title, author, publication date) to forecast whether it reaches the NYT Best Sellers or not, coupled with a regression model that predicts the rank trajectory of the book across weeks.
- **Octavo** - *React, Node.js, Firebase*. An application that helps musicians improve their interval recognition.
- **An[Ti]lles** - *Java, OpenCV.* Control system for FIRST Robotics Competition robot with vision pipeline for automated target detection, and PID controller guided drive and mechanism operation.
- **BeeBetter** - *Flask, Tensorflow.* A web app that evaluates the health of a bee by classifying an image of it.
- **Kaligrafio** - React, Node.js, Firebase. An online portal and text editor that explores the different styles and forms of East Asian calligraphy, both for Chinese characters and for native scripts.
- **Ock** - *React, Node.js, Firebase.* A web app where users collect information on First Robotics Competition matches in real time, with a dashboard for team leaders to make informed match strategy decisions.

ADDITIONAL INFORMATION

- **Skills:** Java, Python, C/C++, HTML/CSS/JS, R, React, Node.js, Firebase, Flask, Tensorflow, Google Cloud, Figma
- **Awards:** AIME 4x Qualifier, USACO Silver, Congressional App Challenge Winner, National Merit Scholarship
- **Interests:** RnB Music, Tea Drinking, Hiking, Basketball, Biking, Reading, Museums