

## Darrel Chang

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### EDUCATION

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#### California State Polytechnic University, Pomona

Bachelor of Science: Computer Science (GPA: 4.0 / 4.0)

Awards: Dean's List, President's List

Graduation May, 2025

Pomona, CA

### EXPERIENCE

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#### *Savage Digital*

May 2023 – Aug 2023

#### Software Engineering Intern | *React, HTML, CSS*

Los Angeles, CA

- Applied expertise in frontend frameworks and tools, particularly React, to craft cutting-edge applications that met high standards of performance and user satisfaction.
- Collaborated closely with cross-functional teams to translate conceptual designs into functional and aesthetically pleasing user interfaces.
- Conceptualized and brought to life UI/UX designs, wireframes, and use cases, shaping visual and interactive aspects contributing to the finalization of architecture ensuring they aligned seamlessly with user expectations.
- Engaged in the end-to-end development process, from ideation to implementation, ensuring that the software met both functional and design requirements with a focus on user-centric design principles.

### PROJECTS

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#### EmoSense Insight Engine - | *Pytorch, pandas, Seaborn, Matplotlib*

- Engineered a CNN-based softmax classifier for high precision facial expression identification.
- Optimized Conv2d layers, ReLU activation, and MaxPool2d layers for feature extraction
- Developed a data analysis interface for learning analytics, providing insights for model optimization.
- Improved generalization and accuracy through Cross-Entropy Loss for enhanced accuracy and preprocessing techniques like Gaussian blur and image flips.

#### Nougat | *Dart, Flutter, Firebase*

- Spearheaded the creation of a cross-platform recipe and meal-sharing social media mobile application using the Flutter framework, ensuring seamless compatibility on both iOS and Android platforms.
- Pioneered the development of a robust Google Firebase backend, employing a NoSQL document-based approach to scale the platform for hundreds of users, ensuring optimal performance and user experience.
- Implemented a secure authentication system using Firebase Auth, prioritizing security and upheld UI/UX standards, enhancing the overall user satisfaction.

#### Boston Dynamics SPOT Trash Sorter | *ROS, Pytorch, YOLO, OpenCV*

- Developed an autonomous trash sorting system using Boston Dynamics SPOT SDK, integrating stereo arm cameras and body cameras for real-time waste identification.
- Implemented an update loop with a refined YOLO image classifier to continuously process camera feeds, enabling dynamic decision-making and real-time sorting into respective waste bins.

#### E-Library | *Express.js, MongoDB, Node, Bootstrap*

- Designed and implemented backend using Node.js / Express.js to handle routing with RESTful API endpoints to enable efficient management of book and author resources.
- Developed a scalable MongoDB database with CRUD operations for book and author models, ensuring data persistence and seamless interaction with the database.
- Integrated Bootstrap for responsive UI/UX design, creating a seamless user experience across various device sizes, including mobile and desktop screens.

### TECHNICAL SKILLS

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**Languages:** Java, Python, JavaScript, Dart, SQL, HTML/CSS, R

**Frameworks:** React, Express.js, Pytorch, TensorFlow, Firebase, Flutter, scikit-learn

**Libraries:** pandas, NumPy, Matplotlib

**Courses:** ML, DS, Design of Algorithms, Mobile App Development, Systems Programming, Assembly Programming, Probability and Statistics for CS, Object-Oriented Programming