

## SKILLS

- **Programming** Javascript ES5/ ES6+, Python3, Java, TypeScript, HTML, CSS, SCSS, C++, Visual Basic, R, PHP
- **Frameworks & Libraries** MERN (React, Redux, Redux Toolkit, Express, MongoDB, Mongoose, Node), Next.js, Prisma, Django, Django DRF, Flask, SQLAlchemy, Sequelize, jQuery, Pandas, Material UI, Tailwind, Figma, Bootstrap, Spring
- **Databases & API** RDBMS, SQL, NoSQL, MySQL, PostgreSQL, MS SQL Server, RESTful API, Amazon Web Services (AWS), webpack, Firebase, Google Map API, JSON, JWT, pgAdmin
- **QA Testing** Maven/JUnit, API testing (Insomnia/Postman), Unit & Integration testing (Mocha/Jest/Cypress), Playwright
- **Functional** UI/UX, GIT, Object Oriented Programming (OOP), Agile/Scrum Methodologies, Jira, Cloud Computing Basics, Web Security, Project Deployment (Heroku, Render, Cyclic), OAuth, Docker, Stripe, Tableau, Power BI, Microsoft Excel/ Access/ Word/ PowerPoint
- **Statistics & Analytics** Grafana Dashboard, Data Modeling, Regression, Decision Trees, Linear Algebra, Calculus
- **Languages** Mandarin, English, Cantonese, Korean

## EDUCATION & HONORS

- **University of California, Berkeley** (Scholarship) **M.S.** May 2017
- **California Institute of Advanced Management** (Dean's List) **MBA** April 2022
- **Zhengzhou University** (Provincial & School Honor Student & Scholarships) **B.E.** June 2015

## LICENSES & CERTIFICATIONS | [more](#)

- **Object-Oriented Data Structures in C++** February 2024
- **Meta Certified Back-End Developer** December 2023
- **Meta Certified Front-End Developer** February 2023
- **The Complete Web Development** February 2023
- **PMP - Project Management Professional** February 2021

## EXPERIENCE

### CANVAS (Construction Robotics) - Software Intern

Feb 2024 - Current

- Led the process of fleet management software development, enhancing order management and operational efficiency for the operational and sales team.
  - Developed backend API routes and frontend UI components using **Next.js 14** and **TypeScript**.
  - Designed and implemented **PostgreSQL** database schema, utilizing **Prisma ORM** for database configuration.
  - Enabled data validation using **Zod**
  - Crafted User Interface (UI) designs in **Figma**; styled UI components with **Material UI**, elevating user experience.
  - Collaborated closely with the Operations Team, Senior Software Engineers, and Supervisor to grasp user requirements and address development challenges effectively.
- Developed performance metrics and **Grafana Dashboards** to monitor machine operational issues and productivity by constructing SQL queries to a mixed PostgreSQL Database Source, contributing to the evaluation and improvement of the performance of the robots and customer success.

### APP ACADEMY - Student

May 2023 - Oct 2023

- Full stack development - Javascript, Python, React, Redux, postgresSQL, Flask, Express, HTML, CSS, Figma, Java

### SOFTWARE PROGRAMMING - Self-taught

June 2022 - April 2023

- **Tools used** - Python3, JavaScript ES5/ES6+, MERN Stack, RESTful API, SQL/NoSQL Databases, jQuery, Ajax, Axios, HTML, CSS, PHP, OOP, GUI, Pandas
- Role-based Organization Issue Management App (**MERN - MongoDB, Express, React, Redux-toolkit, Node.js**)
- Designed and developed the Y.CHEN Design project (**JavaScript DOM**) and Portfolio Site (**React, Redux-toolkit**).
- Completed **Python3** projects - Black Jack Game, Snake Game, Flash Card App, Password Manager **GUI** with **Tkinter**

### INNOVATIVE PROJECT SOLUTIONS - Project Engineer

Mar 2021 - Nov 2021

- Conducted thorough **QA/QC** on engineering documents and corrected design and engineering errors, leading to substantial cost savings and minimized potential legal liabilities.
- **Took on the role of the Lead Project Engineer** for the Pre-construction and QA/QC department.

- Managed project cost, scheduling, and the bidding process for federal projects at **Lawrence National Laboratories**.
- Analyzed project documents, identified and addressed scope gaps, leading to a **successful project procurement**.
- Led subcontractor bid solicitation, evaluation, and negotiation, maintaining positive relationships and securing favorable subcontractor prices.

## GIAMPOLINI & CO - Project Engineer

Oct 2017 - Dec 2020

- Independently designed and developed a Purchase Order Generation and Tracking System using **VBA (MS Visual Basic)**, enforcing **data collection, validation, analyzation, and visualization**.
- Estimated and analyzed project cost, **managed and maintained project databases**, and **visualized project expense data** using various data analytics tools, which facilitated upper management in making informed decisions and maintaining control over project costs.
- Successfully resolved contract disputes, negotiated Change Orders for a favorable value, and rejected unreasonable back-charges and accusations of delays using knowledge in contract law, resulting in **cost savings by 5%**.
- Managed and provided **leadership** for a multi-million dollar **UCSF Child, Teen and Family Center project**, proposed vital engineering solutions that effectively **saved the team from breach of contract and liquidated damages**.
- **Took on the role of Senior project engineer**, managed bid coordination, assigned tasks and provided mentorship to junior engineers.

## PROJECTS | [more](#)

**Moment** | (ReactJS, Redux, Python3, JavaScript, Flask, SQLAlchemy, Bootstrap, AWS S3, PostgreSQL) Oct 2023 - Current  
Full Stack Online social platform for information sharing, discussions, and connections. [live](#) | [github](#)

Features: *CRUD on User Posts, Comments, (Un)following, and Post (Un)liking, Search*

- Implemented **AWS S3** for smooth multi-image uploads and updates, enhancing user experience and data security.
- Executed comprehensive data modeling and validation. Designed and developed a well-structured relational database schema using **SQLAlchemy** and **Alembic**.
- Designed and developed critical **REST API** endpoints utilizing **Python** and **Flask**, accompanied by rigorous API testing through **Postman**, resulting in improved application performance and maintainability.
- Designed and developed a **responsive** single-page application using **React**, developing and managing reusable components to deliver an optimal user experience.
- Architected the frontend **Redux** store structure to prevent muted state and eliminate data collisions.

**Petsy** | (ReactJS, Redux, Python3, JavaScript, Flask, SQLAlchemy, CSS3, PostgreSQL, Figma) Sept 2023 - Current  
Full Stack Online Retail Platform Selling Pet Products. [live](#) | [github](#)

Main Contributions: *UI/UX Design in Figma (80%), Tag feature (80%), Search feature (95%)*

- Led **UI/UX Design** using Figma, visualized and transformed user stories into integrated functionalities
- Significantly contributed to the development, **debug, and troubleshooting** of the Tag Feature as a co-leader
- Independently designed and implemented the UI/UX and backend architecture for the Search Feature using Flask and **Regular Expressions**, optimizing project functionalities and enhancing the overall user experience.
- Engineered database models *with data* validations using **SQLAlchemy** and built API routes in **Flask** to improve the integrity and security of user data.
- Coordinated with the team to implement a streamlined **GIT** process to prevent and resolve merge conflicts

**Little Lemon Restaurant** | (Python3, Django DRF, MySQL, React, CSS, JavaScript, Djoser, Insomnia) Jan 2023 - Dec 2023  
Table Booking System [github](#)

Order Management System [github](#)

- Developed REST API using **Django DRF**, ensured efficient serialization of database models and data validation
- Designed, modeled, and configured **MySQL database** for data retrieving and processing
- Enabled user authentication using **Djoser** - token-based user authentication library, to improve system security.
- Implemented automated unit testing with **Insomnia**, to ensure system reliability and smooth functionalities

**Y.CHEN Design** | (JavaScript DOM, HTML5, CSS3, Bootstrap, MailChimp API, Express, Body-Parser) Oct 2022 - Current  
A Frontend Project Dedicated to UI/UX Design for a Online Designer Fashion Store [live](#) | [github](#)

- Implemented form validations using JavaScript and **regular expressions** to ensure secure and accurate user input
- Designed UI styling and effects and developed an interactive carousel using **JavaScript DOM**
- Newsletter Subscription with JavaScript and the Mailchimp API. Page routing with **Express.js** and **Body-Parser**