

# Yu (James) Cao <Full Stack Web Developer | Software Engineer | Entrepreneur/>

(My preferred name is James. And my last name, Cao, is pronounced as "ts-awh")

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Highly skilled **software engineer** with over **3 years of experience** in implementing complex software solutions, utilizing design patterns and best practices. Seeking a challenging role as a **web developer** in a dynamic and innovative organization. **Green Card holder** with the legal right to work in the US without requiring visa sponsorship. Prefer the flexibility for **remote work** or a hybrid arrangement in the **Greater Boston area**.

## TECHNICAL SKILLS

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- **Frontend:** React | Redux | Next.js | Node | JavaScript | HTML | CSS | RESTful API.
- **Backend:** Node | Express | Python | Flask | SQL | SQLite | PostgreSQL | Sequelize | SQLAlchemy | RESTful API.
- **Tools:** Docker | AWS S3 | Socket.IO | Postman | Mocha | Chai | unittest | pytest | Git | GitHub | Render | Heroku.
- **Mobile:** Swift | Cocoa Design Pattern | UIKit | Xcode | MVC design pattern | LLDB | XCTest | Unit Test.
- **Workflow:** Agile Project Management | Algorithms | Architecture | Debugging | Deployment.

## WEB PROJECTS

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### AirDoD, Practice Full Stack Project during App Academy

[Live Link](#) | [GitHub Repo](#)

- A simple AirBnB clone, allowing users to create/update/delete spots and reviews, with user authentication features.
- Technologies used: React | Redux | Node | Express | Sequelize | Postgres | SQLite | JSON Web Token | bcrypt.js
- Designed database schema, models, and REST API for the backend thoroughly tested with Postman, which increased backend reliability.
- Utilized Redux architecture's unidirectional data flow with React for a predictable state and reliable DOM rendering.

### Flow, Practice Full Stack Project during App Academy

[Live Link](#) | [GitHub Repo](#)

- A simple Music app allowing users to upload their favorite songs, share, comment, and like songs.
- Technologies used: React | Redux | Python | Flask | SQLAlchemy | Alembic | AWS S3 | WTForms | OAuth
- Incorporated AWS S3 and built reusable modal components for CRUD operations, resulting in a smoother user experience.
- Integrated React Player with Redux's global store by dispatching actions only when sharing information across components and encapsulating music player data to give the user a seamless, uninterrupted experience.

## WORK EXPERIENCE

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### Stay Home Dad, Career Break

Boston, MA | 2021/05 - 2023/03

- Solved 300+ problems on LeetCode.
- Learned iOS & Swift course by Dr. Angela Yu on Udemy.com.
- Learned Machine Learning and Deep Learning course by Andrew Ng on Coursera.com.

### Co-founder and CTO, Skelmet Inc.

Boston, MA | 2016/03 - 2021/05

- Co-founded the company as CTO and spearheaded the development of the industry's first parametric design system for personalized custom-fit sunglass frames, securing \$500,000 in angel investment. Recognized by Forbes 30 Under 30 in 2018 and featured in several other prominent magazines in 2018.
- Served as the principal investigator for an NIH-funded research program in collaboration with Mass Eye and Ear Hospital, leading the design of medical devices for vision rehabilitation. These innovations positively impacted 20+ patients, significantly improving their eye functions from ptosis. Secured a total of \$150,000 in funding for the Phase I program in 2019.
- Led a dynamic software development team in the creation of multiple 3D scanning apps on the iOS platform, facilitating

precise head measurements for customized eyewear frame design. Accumulated over 1000 valuable 3D head scanning samples, which played a pivotal role in product research and development in 2019.

- Developed the company's e-commerce shopping website utilizing WordPress, HTML, CSS, and Javascript, effectively managing a high volume of orders and contributing to a revenue of \$50,000 in 2020.
- Innovated and designed a patented hinge system for sunglasses frames, initiating contact with the manufacturer and successfully delivering a premium-quality product to the market in 2019.
- Designed and Implemented a PDF generation system showing custom-fit specs using Python and Latex, letting customers know better about the uniqueness of their sunglasses frames, which are used in hundreds of orders.

## EDUCATION

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### App Academy

Fulltime Online | 2023/03 - 2023/09

- A rigorous six-month, full-time online program for full-stack web development, 1000-hour immersive learning and training, with <3% acceptance rate and >50% elimination rate.
- Teaches full-stack web development: Python, SQL, JavaScript, React, TDD, algorithms, design patterns, and programming best practices. Topics include TDD, scalability, algorithms, OOP, coding style, REST, security, single-page apps, and web development best practices.

### Columbia University

New York City, NY | 2014/09 - 2015/12

- Ivy League, one of the top five universities in the US
- Master of Science in Electrical Engineering

### Tsinghua University

Beijing, China | 2010/09 - 2014/07

- The top engineering university in China
- Bachelor of Science in Electrical Engineering

## AWARDS

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### Forbes 30 Under 30

North America | 2018

- An annual list published by Forbes magazine that recognizes outstanding individuals under the age of 30 who have achieved notable success and made significant contributions in their respective fields.

### MassChallenge Silver Award

Boston, MA | 2018

- A global nonprofit accelerator program and competition that supports early-stage startups by providing resources, mentorship, and access to potential investors and partners.

### HAX Growth Accelerator

San Francisco, CA | 2017

- A program designed to foster the growth of hardware startups by providing funding, mentorship, and access to a network of experts and resources, with a focus on product development and scaling.