

# CHENYANG (RAPHAEL) DU

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👤 [Portfolio](#)

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## Education

**Santa Clara University, CA, USA**

*Master of Science in Computer Science*

**Sep 2023 – Present**

*GPA 3.95/4*

**Duke University, NC, USA**

*Master of Science in Civil and Environmental Engineering*

**Sep 2021 – May 2023**

*GPA 3.81/4*

## Technical Skills

**Languages:** JavaScript, TypeScript, Java, Dart, Python, C/C++, HTML/CSS, Ruby, SQL, GraphQL, R, Verilog

**Frameworks:** React, React Native, ThreeJS, NextJS, RemixJS, Flutter, Django, Flask, Springboot, Ruby on Rails

**Databases & Tools:** Git, Jira, AWS, GCP, MySQL, MongoDB, PostgreSQL, Docker, Kubernetes, Figma, Postman, Cypress

## Work Experience

**Promaxo**

**Jun 2024 – Sep 2024(Summer Intern), Sep 2024 – Present(Return)**

*Software Engineer Intern*

*Oakland, CA*

- Designed and built features for innovative medical imaging platform and case management system which reduced image processing time by **30%** and improved the efficiency of managing patient information by **25%**.
- Integrated **Google Cloud Healthcare** to ensure HIPAA-compliant storage and secure transmission of patient data, significantly enhancing security and confidentiality. Developed and deployed **AWS Lambda functions** to automate the extraction and processing of DICOM image data, enabling the machine learning team to access and analyze healthcare datasets in real-time.
- Collaborated with **Cross-functional teams** (software, imaging, product, data science, and clinical) to gather requirements and make sure development process is on track. Implemented features using **React, Node.js, Express, MongoDB, and GCP**.
- Developed a scalable test framework using **TDD**, increasing test coverage to **80%** across unit, integration, and end-to-end tests with **Cypress**. Leveraged **OOD** principles to minimize redundant code and streamline the testing process, improving dev efficiency.
- Enhanced the **CI/CD** pipeline, integrating automated testing, npm audits, secret scans, and SonarCloud checks, reducing deployment time by **20%** and ensuring high code quality.

**Lenovo**

**May 2024 – Present**

*Software Engineer Intern*

*Remote*

- Developed a **3D interactive** workplace digital human application using **ThreeJS, React** and **ExpressJS**.
- Improved the application's user experience by creating a seamless, real-time conversational AI with lifelike responses. Integrated the **Web Speech** for voice interaction and the **Speech Synthesis** for natural, responsive dialogue.
- Developed a backend using **Express** to manage voice inputs and file uploads. Implemented a **microservices architecture** to separate services for improved maintainability and fault tolerance, enhancing **system scalability** and reducing operational complexity. This architecture enabled efficient voice data processing, resulting in smoother real-time interactions and a **25%** reduction in processing time.
- Enhanced the digital human application with AI-driven features, including an **Intelligent Meeting Assistant** for automated meeting management, **Emotion Navigation** using computer vision to analyze user expressions, **Content Filtering** for secure environments, and **Image Recognition** for smart device control.

**Datatrixs**

**Mar 2024 – Jun 2024**

*Software Engineer Intern*

*San Francisco, CA*

- Led a team** to utilize **MERN stack** to build a full-stack application with a serverless architecture that empowers CPAs by automating their workflow with data visualization tools.
- Attend **investors' sync meetings**, improve site performance and user satisfaction based on client feedback, design and implement tab and AI chart generation feature, resulting in a **50%** increase in follow-on investment.
- Reconstruct the **MongoDB** schema and token-based authentication flow, optimizing data transmission and sharing, directly contributed to **2 new companies' investment**

**Cooledtured Collections**

**Nov 2023 – Mar 2024**

*Full Stack Web Developer Intern*

*Burbank, CA*

- Contributed to migrating Cooledtured's storefront from Shopify's front-end to a React-based custom headless e-commerce stack (**Shopify Hydrogen + Remix.js**), enhancing scalability, performance, and faster page load times.
- Developed the website using **React** with **TypeScript** and **Tailwind** in collaboration with UI/UX teams.
- Implemented a robust **GraphQL-based** search engine with predictive search and product recommendations, resulting in increased session duration, user engagement, a **15%** boost in product discovery, and a **10%** rise in sales conversions.

## Projects

**Personal Portfolio Website** | 🐙

- Built a responsive and customizable portfolio website using **Next.js** with **Typescript** and **Tailwind**, deployed via Vercel.

**Restaurant Management System** | 🐙

- Architected and implemented **REST API** using **Django REST Framework** for menu-item management, cart operations, and order processing. Ensured data consistency with **MySQL** integration, incorporating authentication, search functionality, pagination, and API throttling. Reduced foreign key usage to minimize table update contention and enhance database scalability. Utilized **Postman** for API testing and debugging.