Kevin Zheng

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EDUCATION

Carnegie Mellon University — Pittsburgh, PA
B.S. in Information Systems, Additional Major in Computer Science — *Aug. 2023 – May 2026*
- Dean's List High Honors | GPA: 3.86/4.0
- Relevant Coursework: Principles of Imperative Computation (C), IS Milieux (HTML/CSS, JavaScript, SQL) Database Design & Development (PostgreSQL, MongoDB), Principles of Functional Programming* (SML), Application Design and Development* (Ruby, React), Introduction to Machine Learning* (Python)
- Extracurriculars: Tech4Society, Phi Delta Theta, Asian Students Association, Taiwanese Students Association

EXPERIENCE

Software Engineering Intern — Jun. 2024 – Jul. 2024
Qifu Technology Inc — *Shenzhen, China*
- Integrated MongoDB into the company's internal big data management and analytics platform, enhancing data accessibility and reducing query complexity for users by 40%
- Developed and implemented a whitelist mechanism and toggle feature to securely manage user access to the MongoDB engine for testing purposes, leveraging Apollo for tracking all configuration variables
- Collaborated using Jira, GitLab, and Docker; conducted code reviews and participated in sprints to achieve platform updates

Co-Founder — Jun. 2024 – Present
PathToSWE
- Founded and developed a full-stack application allowing 200+ users to easily find, apply, and track tech internships and personal applications using a Next.js (React, Node), TypeScript, Tailwind CSS, and Postgres tech stack
- Designed and implemented RESTful API to perform user and event CRUD operations while optimistically updating UI, and secure user authentication using JWT with credentials or with Google OAuth 2.0
- Utilized multiple AWS Lambda functions, SQS, and Eventbridge to periodically web scrape and export new unique internship openings to Amazon RDS for PostgreSQL using BeautifulSzaoup4 and psycopg2

Undergraduate Research Assistant — Sep. 2024 – Present
LearnLab at Carnegie Mellon University — *Pittsburgh, PA*
- Developed the Next.js and React front-end for GPTutor-Math, an AI-powered tutoring platform for multiple CMU math courses, providing homework guidance to 500+ students
- Integrated ChatGPT to facilitate personalized learning, significantly enhancing student engagement and feedback
- Collaborated with a multidisciplinary team to deploy scalable AI solutions, utilizing Git for version control and Agile methodologies to ensure timely project delivery

Undergraduate Teaching Assistant — Jan. 2024 – Dec. 2024
Carnegie Mellon University | 15-112 Fundamentals of Programming and Computer Science — *Pittsburgh, PA*
- Led weekly recitations for 20+ undergraduate students, utilizing real-world coding problems to explain Python concepts such as object-oriented programming, recursion, and algorithmic efficiency
- Conducted 3+ weekly office hours and small group sessions to provide personalized guidance to students
- Evaluated assignments and exams weekly, using detailed rubrics and delivering constructive feedback

PROJECTS

Stripe Database Design | *PostgreSQL* — Nov. 2024 – Nov. 2024
- Designed and normalized Stripe's ER diagram to BCNF, improving database efficiency and ensuring data integrity
- Developed comprehensive user stories and generated data to validate requirements and simulate real scenarios
- Implemented optimized database operations supporting user functionalities, ensuring consistency and performance

C0 Virtual Machine | *C, C0* — Apr. 2024 – Apr. 2024
- Implemented a Virtual Machine to execute programs written in C0, a safe subset language of C developed at CMU
- Developed instruction set for C0 language, translating high-level operations into executable bytecode, optimizing performance and memory usage with properly implemented stack and heap allocation for the user

Time Locker: 112 Edition | *Python* — Nov. 2023 – Dec. 2023
- Developed a top-down shooter game with a unique time-warping mechanic using Python and CMU graphics
- Implemented irregular-polygon collision detection with vector mathematics and random enemy generation

TECHNICAL SKILLS

Languages: Python, C, HTML/CSS, JavaScript, TypeScript, SQL (Postgres, MySQL, MongoDB), SML, Ruby
Frameworks/Libraries: Next.js, React.js, Flask, Node.js, React Native, Expo, TailwindCSS, Prisma, Auth.js, Bootstrap, jQuery, pandas, Ruby on Rails, NumPy
Developer Tools: Git, Jira, Docker, VS Code, LaTeX, AWS, Vercel, Supabase, REST APIs, pgAdmin, Figma