CHRISTOPHER CHEN

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EDUCATION

BROWN UNIVERSITY Providence, RI | September 2022 - May 2026
Sc.B in Applied Mathematics—Computer Science Cumulative GPA: 3.88/4

Relevant Coursework: Operating Systems; Computer Vision; Design and Analysis of Algorithms; Software Engineering; Numerical Optimization; Operations Research in Probabilistic and Deterministic Models

SKILLS

Languages: Python, Java, C/C++, Javascript, Dart, HTML/CSS
Technologies: React, Express.js, Node.js, RESTful API, MongoDB (NoSQL), SQL, Django, Flutter, Git, Docker, VIM, Figma, TailwindCSS

PROFESSIONAL EXPERIENCE

Vane, *Software Engineering Intern* Remote | June 2024 - Present

- Worked in an Agile environment to deliver a reactive, declarative mobile app using Flutter and MongoDB, accelerating feature delivery by 30% compared to previous iterations
- Constructed a web database editor using React, Node.js, and Express.js, and engineered robust APIs that facilitates synchronous data updates between 5+ team members, improving project turnaround time by 25%
- Contributed over 500 lines of server-side and UI code for the implementation of a social party chat feature, including creating relevant MongoDB schemas and Atlas functions
- Automated event data collection with a Python-based web scraping system using pandas and Beautiful Soup, reducing manual entry by 80% and streamlining data processing with MongoDB aggregation pipelines

TetherView, *Data Analysis and Marketing Intern* Oceanport, NJ | January 2022 - June 2022

- Developed web scraping algorithms using Python to collect and analyze datasets on web traffic and keyword frequencies relevant to TetherView's target audience to write effective meta descriptions and ad copies for the company website, leading to a 20% increase in TetherView's website traffic
- Created, edited, and published advertising material for TetherView's blog and YouTube channel, garnering hundreds of views under each domain

PROJECTS

Weenix OS, *CSCI2670: Operating Systems* Spring 2024

- Engineered a comprehensive operating system kernel in C, based on Unix, over 14 weeks, managing over 5,000 lines of code to simulate a fully functioning OS
- Managed user address spaces by implementing memory objects, virtual memory mapping, and system calls, handling up to 1,000 simulated user processes simultaneously without errors
- Designed and integrated core components, including virtual file systems, on-disk file systems, and synchronization primitives, ensuring the OS could handle file operations with 99.9% reliability during testing

Tomorrow@Brown, *Hack@Brown* Spring 2024

- Led frontend development efforts, implementing 3+ landing pages using JavaScript and React, and successfully connecting backend to frontend endpoints within 24 hours during the hackathon
- Preprocessed 200+ on-campus event emails and constructed a system that leverages the TF-IDF algorithm and cosine similarity to rank and return relevant emails based on user queries, optimizing responsiveness to verbose prompts