CHRISTOPHER CHEN

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EDUCATION

BROWN UNIVERSITY   Providence, RI| 09/2022 - 05/2026
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, Matlab, R
Technologies: React, Express.js, Node.js, MongoDB (NoSQL), SQL, Django, Flutter, Git, Docker, VIM, Figma, TailwindCSS

PROFESSIONAL EXPERIENCE

Brown IVL (BRICS), *Incoming Undergraduate Research Assistant*   *September 2024 - December 2024*
- Developing and maintaining low-level software for multi-camera systems in C++ and Python, contributing to the expansion of the BRICS system from 50 to 300+ cameras for advanced human-robot interaction capture
- Collaborating with research associates to advance state-of-the-art 3D computer vision and deep learning algorithms, focusing on neural fields for modeling visual and physical quantities in scenes and objects
- Contributing to the design of hardware components through 3D modeling in Autodesk Inventor and Fusion360

Vane, *Software Engineering Intern*   *July 2024 - Present*
- Working in an Agile environment to develop a reactive, declarative mobile app using Flutter and a web database editor app using React, TailwindCSS, Node.js, and Express.js, facilitating event advertisements and social party planning for businesses, communities, and users
- Aiding in the research and development of a social party chat feature, utilizing WebSocket for real-time communication over TCP/IP and Kafka for message distribution to ensure low latency, reliability, and security
- Developing a web scraping system using Python, pandas, and Beautiful Soup to automate the collection of event data, integrating it with custom MongoDB collections through atlas functions using the aggregation pipeline

TetherView, *Data Analysis and Marketing Intern*   *January 2022 - June 2022*
- Developed web scraping algorithms using Python to collect and analyze vast datasets on web traffic and keyword frequencies to write effective meta descriptions and ad copies for TetherView's 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 for each domain

PROJECTS

Weenix OS, *CSCI2670: Operating Systems*   *Spring 2024*
- Engineered a comprehensive operating system kernel in C, based on Unix, over 14 weeks
- Managed user address spaces by implementing memory objects, virtual memory mapping, and system calls to ensure seamless interaction between user and virtual interfaces
- Designed and integrated core components, including virtual file systems, on-disk file systems, and process and thread synchronization primitives, to create a robust and efficient operating system

Tomorrow@Brown, *Hack@Brown*   *Spring 2024*
- Constructed a system that accepts user queries and returns the most relevant emails regarding on-campus events to streamline event information access
- Led as the frontend developer on team, implementing several landing pages using Javascript and React components and connecting backend endpoints to frontend
- Leveraged the TF-IDF algorithm and cosine similarity to accurately rank emails based on user queries, optimizing responsiveness to verbose prompts