

Kevin Wang

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EDUCATION

University of Michigan

Ann Arbor, MI

B.S.E. in Computer Science. Minors in Mathematics and Statistics

August 2020 – May 2024

- Major GPA: 3.9/4.0; University Honors, Dean's List, James B. Angell Scholar
- **Courses:** Operating Systems, Computer Networks, Web Systems, Machine Learning, Linear Algebra, Discrete Math
- **Current:** Database Management Systems, Compiler Construction, Human-Centered Software Design

PROGRAMMING SKILLS

Languages: C/C++, Python, Java, JavaScript/TypeScript, SQL, HTML/CSS, R, Rust, MATLAB

Frameworks: React.js, Node.js, Vue.js, Material UI, TailwindCSS, Flask, Jinja, Bootstrap, FastAPI

Technologies: Git/GitHub, Unix, Bash, x86, Hadoop, PostgreSQL, SQLite, MongoDB, JSON, REST API

EXPERIENCE

Raytheon Technoloiges | *Software Engineer Intern*

May 2023 – Aug. 2023

- Developed support software for deployed DoD Linux systems as part of the Physical Sciences & Systems team.
- Created a tool using C to efficiently monitor and report server failures, providing insights for 1 contract client.
- Designed algorithm to identify server failures and handle invalid data, resulting in 24% fewer false positives.
- Integrated unit tests to ensure software reliability and maintained documentation to support future developments.

UnitedHealth Group | *Product Manager Intern*

June 2022 – Aug. 2022

- Assisted engineers in aggregating healthcare data of 250 million people as part of the Digital Identity team.
- Led a team of interns to overhaul product documentation using MKDocs, generating \$400,000 in savings.
- Streamlined documentation for the data matching algorithm, increasing developer productivity by 27%.
- Presented progress and project impact to major shareholders in biweekly meetings.

University of Michigan | *Machine Learning Researcher*

Sep. 2021 – Nov. 2022

- Researched Volterra signatures and their applications to deep learning and convolutional neural networks.
- Designed high-performance algorithms to compute Volterra signatures, reducing computational costs by 92%.
- Built a predictive Convolutional Neural Network model by replacing components with Volterra Signatures.

PROJECTS

MatchHub | *FastAPI, React, PostgreSQL, TailwindCSS*

- Created a dashboard using React to display upcoming Premier League matches and important statistics.
- Stored user profiles using PostgreSQL and utilized JavaScript/TailwindCSS to create user watchlists.
- Engineered an REST API using FastAPI to retrieve match data, reducing application response time by 11%.

Search Engine | *Hadoop, SQL, React, Flask*

- Built a search engine in React and Python and integrated PageRank and TF-IDF into 3 query index servers.
- Constructed a parallel data pipeline utilizing Hadoop and MapReduce increasing processing efficiency by 16%.
- Developed a search server to make concurrent queries to index servers and return results in HTML format.

Network File Server | *C++*

- Developed a network file server in C++ allowing users to create, write, read, and delete files and directories.
- Processed requests from different clients concurrently using threads, mutexes, and condition variables.
- Established network communication between clients and server utilizing socket programming and TCP.

Static Router | *C*

- Built a static router using C to receive and forward Ethernet frames according to ICMP, ARP, and IP protocols.
- Implemented ICMP handling, ARP requests, and checksum verification to ensure proper data transmission.
- Maintained ARP cache for efficient next-hop MAC address resolution leading to a reduced average forwarding time.

ACTIVITES & AWARDS

- **Quantitative Investment Society:** Club member. Developed projects and interests in quantitative finance.
- **Michigan Hackers:** Machine learning team lead. Organized computer vision projects in a club of >100 members.
- **Regent's Merit Scholarship (UofM):** Scholarship awarded to the top 2% of in-state students.