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 – GPA: 3.7/4.0; University Honors, Dean's List
- **Courses:** Operating Systems, Computer Networks, Web Systems, Machine Learning, Probability, Statistics
- **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, 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 10+ customers.
- 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.

Optum Healthcare | *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 | *Researcher* Nov. 2021 – June 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.

Software Projects

MatchHub | *FastAPI, React, PostgreSQL, TailwindCSS, Python, JavaScript*

- 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%.

Ethernet Router | *C, Mininet, VSCode, Unix*

- Implemented a functional router using C to successfully route Ethernet packets in Mininet
- Enabled packet forwarding, ICMP message handling, and checksum verification to ensure seamless data transmission
- Maintained ARP cache for efficient next-hop MAC address resolution resulting in reduced latency

ChampPredict | *Python, NumPy, Pandas, scikit-learn*

- Built the Bradley-Terry-Luce model in Python to predict the outcome of the Champions League final.
- Trained a L2-Lasso Logistic Regression model on 100+ games and utilized cross-validation to prevent overfitting.

Instagram Clone | *JavaScript, React, Python, Flask, HTML/CSS, SQL*

- Created an Instagram clone with dynamic pages (JavaScript/HTML/CSS) and a REST API (Python, Flask)
- Utilized MySQL to establish relationships among tables that represent users, photos, likes, photo tags, and followers
- Implemented interactive features such as infinite-scrolling and double-click liking using React

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.