JOHN XIE

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Education

University of Michigan　　　　　　　　　　　　　　　　　　　　　　　Ann Arbor, MI
B.S in Computer Science and B.B.A in Business Administration (Ross School of Business)　　Expected May 2026
- **GPA:** 4.0/4.0
- **Coursework:** Data Structures & Algorithms, Web Systems, Object-Oriented Programming, Computer Systems Architecture, Theory of Computer Science, Linear Algebra, Discrete Mathematics, Human Centered Software
- **Activities:** MECC Consulting Group (Director of Finance), Atlas Digital Tech Consulting, Michigan Investment Group

Professional Certificates
- **DeepLearning.AI:** Structuring Machine Learning Projects, Convolutional Neural Networks, Improving Deep Neural Networks, Neural Networks and Deep Learning
- **Academic Institutions:** Machine Learning (Stanford), CS50 (Harvard)

Experience

Amazon Web Services　　　　　　　　　　　　　　　　　　　　　　　Seattle, WA
Software Development Engineer Intern, AWS Billing　　　　　　　　　　May 2024 - Present
- Implemented parity testing API which highlighted bill calculation differences and root causes between legacy system and new Inca platform during company migration using Java CI/CD pipelines to increase correctness check efficiency by 30%
- Deployed backwards-compatible reusable service with internal dashboard and scalable infrastructure containing AWS S3, DynamoDB, ELB, and SQS on AWS ECS Fargate clusters to support 7 use cases and 160,000 requests per minute

University of Michigan College of Engineering　　　　　　　　　　　Ann Arbor, MI
Instructional Aide, EECS 376: Theory of Computer Science　　　　　　　Apr 2023 - Present
- Supported student learning with team of 20 instructional aides by providing personalized assistance through weekly office hours and creating course content such as exam and homework questions for 750+ students
- Taught weekly discussion lectures on topics including algorithms (Divide & Conquer, Dynamic Programming), cryptography (RSA), computability (Turing Machines, Decidability), and complexity (P, NP) to 30 students

Verizon　　　　　　　　　　　　　　　　　　　　　　　　　　New York, NY
Software Engineering Intern, AI & Data–Network Enablement Team　　　Jun 2023 – Aug 2023
- Modeled competitor Wi-Fi network expansion to identify 2,000 census blocks out of 8.1M at high-risk of losing subscribers using Python NumPy and Pandas libraries, culminating in final presentation to 150 stakeholders
- Analyzed competitor network presence to identify areas where competitors had slower Wi-Fi networks than Verizon's fast Wi-Fi, ultimately recommending expansion into 5,000 untapped census blocks with a potential $15M opportunity value

Ultima Insights　　　　　　　　　　　　　　　　　　　　　　　Ann Arbor, MI
Software Engineer Intern　　　　　　　　　　　　　　　　　　　Jan 2023 – Sep 2023
- Developed frontend web app with 6 software consultants to filter key financial news for investors based on user preferences using React.JS, Typescript, AWS, and REST API calls resulting in public beta access launch for 600+ users
- Optimized front-end by adding user authentication, accessibility features, and server-side rendering to streamline user experience resulting in decreased load-time by 90% and increased user satisfaction by 10%
- Examined consumer behavior through data analysis on KPIs such as open rate and click-through rate using Python Pandas library to pilot 5-week marketing campaign which boosted user engagement by 15%

Mentaro　　　　　　　　　　　　　　　　　　　　　　　　　Great Neck, NY
Software Engineer　　　　　　　　　　　　　　　　　　　　　Nov 2020 – Aug 2022
- Engineered full-stack, iOS, and Android products to address workplace related mental health concerns with 6 member team using React.JS, React-Native, Python Flask, and PostgreSQL relational database, ultimately assisting 100 users
- Implemented features such as mood surveys, multimedia journaling, and dynamic breathing exercises to facilitate workplace mental health discussions at 4 local companies increasing workplace productivity by 25%

Personal Projects

Deep Learning Map Generator
- Upgraded computer vision algorithms by integrating the clDice cost function into a convolutional neural network (CNN) to improve automated creation of digital maps from satellite images by 3-4% on the Dice Coefficient and Jaccard Index

AI/NLP Fake News Detector
- Piloted novel method for detecting fake news by integrating multiple machine learning models such as SVM, KNN, Naive Bayes, and Decision Trees using the Sklearn Python library to identify fake news with 90% accuracy

Skills/Additional

Skills: Python, C/C++, Javascript, React.JS, Firebase, SQL, Java
Interests: Volleyball, Tennis, College Football, Wushu, Valorant