JOSHUA XIE

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EDUCATION

University of Michigan - Ann Arbor, MI   *Expected 2025*
B.S.E in Computer Science and Engineering   *Major GPA 3.6*

- **Relevant Coursework:** Programming and Intro Data Structures, Discrete Mathematics, Introduction to Statistics and Data Analysis, Data Structures and Algorithms, Computer Organization, Web Systems, Software Engineering, Machine Learning, Linear Algebra
- **Activities:** Michigan Hackers, Michigan Solar Car Team, Sigma Nu Fraternity

Newport Senior High School - Bellevue, WA   *2018-2022*
High School Diploma   *GPA 4.3*

- **Relevant Coursework:** AP Computer Science A, AP Calculus AB, Data Structures and Algorithms
- **Activities:** Football - *Captain*, Student Government - *President*, Programming Club - *Co-President*, Math Club - Co-President
- **Awards:** USAMO Qualifier, USACO Platinum Division Qualifier

EXPERIENCE

Microsoft   *May 2023 - August 2023*
Software Engineering Intern   *Beijing, China*

- Worked full-time on-site at Microsoft's Cloud&AI computer vision team.
- Implemented a Flask REST API allowing users to call AzureOpenAI's GPT-4 model for data analysis.
- Leveraged Langchain to handle back-end workflow and tune GPT models for 70% improved response accuracy.
- Created a memory framework storing up to 32,000 tokens equivalent to 12 OCR performance datasets, allowing users to use information given to the GPT model from previous calls.
- Wrapped back-end API using Docker for integration with 6 other existing images in production.
- Designed dynamic user interface with ReactJS to handle authorization and retrieval of data from OCR's analytic database.
- Delivered chat integration specific to analyzing OCR performance used by 17 Engineers and improving workflow by 35%.
- Wrote design documents for API that were read and approved by Principal and Senior Engineers.

Wormpex AI Research   *June 2022 - August 2022*
Research Intern   *Bellevue, WA*

- Worked remotely on a team of 6 interns, developing and debugging a machine learning driver in Python.
- Addressed overfitting in classifier training and improved driver efficiency by up to 6.5%.
- Created a web scraping script using Selenium and BeautifulSoup to retrieve data relevant to classifier training.
- Optimized the speed of the company homepage by 30%.

PROJECTS

Autograder

- Created an auto-grader that runs test cases on coding competition contestant source codes and matches output to a pre-existing output solutions file.
- Developed a full-stack interface that allows users to save submissions for past contests in personally created accounts on a fully-interactive website.

SKILLS

Languages	C++, Java, Python, C, SQL, HTML, CSS, JS
Technologies	Azure, AWS, LaTeX, Linux, Git
Additional	Flask, NodeJS, NPM, Postman, Selenium, BeautifulSoup