Peter Yang

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Education

University of Michigan — Ann Arbor, MI

Bachelor of Science in Computer Science, Mathematics, Statistics, Data Science — *May 2025*

- **GPA**: 3.83/4.00
- **Organizations**: LGBTQ+ Michigan, Michigan Hackers, Math Club
- **Relevant Coursework**: Data Structures and Algorithms, Object Oriented Programming, Web Systems, Machine Learning, Computer Vision, Conversational Artificial Intelligence, Computer Security, Deep Learning for Bioinformatics, Linear Regression, Numerical Linear Algebra, Real/Complex Analysis, Statistical Consulting

Experience

Software Engineer Intern — May 2024 – Aug 2024

MathWorks - App Designer and Infrastructure Services Team — *Boston, MA*

- Developed JavaScript APIs for conversion between plaintext and binary MATLAB app designer file formats
- Utilized the Dojo framework to create front-end UI functionality in MATLAB, enhancing user interaction
- Automated deployment with a CI/CD pipeline, created 15+ comprehensive unit tests to assess speed, accuracy, and memory efficiency, executed integration tests on a Kubernetes cluster, merged and deployed to production

Software Engineer Intern — May 2023 – Aug 2023

MathWorks - Data Science Types Team — *Boston, MA*

- Developed a low-latency parser in C++ to parse unicode time data strings into MATLAB duration objects
- Leveraged ISO Unicode and globalization libraries in C++ to achieve parsing of data strings in over 250 languages
- Created project specifications and employed design patterns to ensure integration and modularity with existing duration parsing format

Machine Learning Researcher — March 2024 – Present

Michigan Statistics for Individualized Healthcare Lab — *Ann Arbor, MI*

- Developed a linear mixed model to predict typing speed using sleep metrics using Apple Sensorkit Data
- Conducted exploratory data analysis (EDA), creating 30+ visualizations to uncover trends and validate data insights

Club President — Sep 2021 – Jun 2022

University of Wisconsin Math Club — *Madison, WI*

- Led efforts to increase weekly attendance from 3-5 to 30+ members by organizing collaborative talks with faculty, PhD students, and interdisciplinary events with other STEM clubs
- Successfully secured funding from the Math Department, developed branded merchandise, and launched a peer-to-peer mentorship program

Projects

Video Subtitle Translation Microservice | *Python, OpenAI Whisper, FastAPI, MoviePy, FFmpeg*

- Created a program in Python leveraging the OpenAI Whisper API to translate and generate multi-language subtitles for videos
- Built backend using FastAPI for deployment as a scalable microservice, optimized for low-latency API responses
- Utilized MoviePy and FFmpeg libraries to handle audio extraction and embedding translated subtitles

StockXGuess | *React.js, Spring Boot, PostgreSQL, AWS*

- Developed an interactive web-based StockX sneaker price guessing game using the React.js framework
- Designed and implemented a RESTful API using Spring Boot to manage sneaker and user data using PostgreSQL
- Deployed the application online using an AWS EC2 instance

Technical Skills

Languages: Python, Java, JavaScript, C/C++, SQL, Go, R, MATLAB
Frameworks/Libraries: React.js, Node.js, Express.js, Spring Boot, Flask, FastAPI, GraphQL, Jinja2, Bootstrap, NumPy, pandas, Scikit-Learn, PyTorch, BeautifulSoup, Selenium, CUDA, AWS, Azure, Firebase
Developer Tools: Git/Github, Unix/Linux, Visual Studio, VS Code, IntelliJ, Perforce, Eclipse, Jira, Confluence
Concepts: Software Engineering, Full Stack, Frontend, Backend, Web Frameworks, Agile/Scrum, REST API, Machine Learning, Cloud Computing, Microservice Architecture, Data Science, Data Analysis, Probability Theory, Statistics