JOVAN YAP

jovanyap@umich.edu • Michigan, USA / Singapore • linkedin.com/in/jovanyap • github.com/jovanyap

EDUCATION

Carnegie Mellon University   **Pittsburgh, PA**
Master of Science in AI Engineering - Electrical and Computer Engineering (Offered)   *May 2026*
Coursework: Data Structures & Algorithms, Software Engineering, Computer Networks, Distributed Systems, OSCP

University of Michigan – Ann Arbor   **Ann Arbor, MI**
Bachelor of Science in Computer Science - Electrical and Computer Engineering GPA: 3.9/4.0   *May 2025*
Coursework: Web System, Computer Vision, Machine Learning, Operating System, UI/UX Frontend, Computer Security

WORK EXPERIENCE

Govtech (Video Analytics Team)   **Singapore**
AI Software Engineer Intern   *May 2024 – Aug 2024*
- Built a **multimodal** RAG misinformation detector with 91% accuracy using VLMs like Llava and Idefices2.
- Developed a large-scale serverless AI Video & Face Indexing System with 30k users with NextJS on AWS.
- Built the backend architecture for a media indexing system with DynamoDB, API gateway, Rekognition, Lambda Fns
- Developed Web Crawlers to curate News articles dataset and to streamline fake news detection workflows.

Land Transport Authority   **Singapore**
Machine Learning Engineer Intern   *Jun 2023 - Aug 2023*
- Designed the reinforcement learning distributed training pipeline using Pytorch AWS to train the Meta Llama2 LLM.
- Developed multithreading Meta llama2 training pipeline and studied the deployment of chatbots using semantic search.

Medios (MedTech Startup)   **Singapore**
Machine Learning Engineer Intern   *Dec 2022 - May 2023*
- Performed image and data processing and annotation and trained a deep learning model with TensorFlow on AzureML.
- Deployed an eye image quality classifier with a remarkable 93% accuracy for clinical trials to filter clear images.

PROJECT & RESEARCH EXPERIENCE

University of Michigan Human-AI Lab   **Ann Arbor, MI**
Agentic AI Software Engineer   *Current*
- Developed WorldScribe, integrating memory for context-aware descriptions, enhancing accessibility for blind users.
- Designed an AI agent with dynamic memory system, reducing repetitive descriptions and enabling real-time interactions.

Autonomous Robotics Vehicles Organization *(Computer Vision Team)*   **Ann Arbor, MI**
Machine Learning Engineer   *Jan 2024 - May 2024*
- Designed the AI deep learning algorithms to train the YOLO instance segmentation model and deployed it on **ROS**.
- Deployed model on the autonomous vehicles with sensors module with GPS, Lidar, Camera, and WiFi.

University of Michigan Mcity (Smart City)   **Ann Arbor, MI**
AI Software Engineer   *Jan 2024 – May 2024*
- Built a scalable AV simulation platform using SUMO for traffic modelling, enabling iterative testing of AV.
- Designed the Redis database and vehicle dynamics communication system between macro- and micro-simulators.

University of Michigan EECS485 Web Systems   **Ann Arbor, MI**
Fullstack Software Engineer   *Jan 2024 – May 2024*
- Developed an Instagram-like software AWS, React front-end, Flask back-end and relational database with REST API.
- Designed a MapReduce distributed system with network programming TCP using Hadoop and multithreading.
- Engineered a search engine with dynamic information retrieval algorithms like tf-idf text analysis and link analysis.

TECHNICAL SKILLS

Language/Database: Python, C++/C, HTML/CSS, JavaScript, TypeScript, SQL, Swift, Java, PostgreSQL, Go
Frameworks & Libraries: CUDA, ReactJS, VueJS, NextJS, Pytorch, TensorFlow, Langchain, Chroma, Keras, Hadoop
Platforms & Tools: AWS (EC2, Sagemaker), AzureML, RESTAPI, Docker, Git, DevOps, Terraform, Figma