

TYME KUMTHAMPINIJ

tyme@umich.edu • 505 - 445 - 4545 • linkedin.com/in/tymekumthampinij • US Citizen

EDUCATION

University of Michigan, Ann Arbor MI

August 2022 - May 2026

Bachelor of Science in Computer Science

- **Cumulative GPA:** 3.65
- **Coursework:** Data Structures & Algorithms, Web Systems, Computer Systems Architecture, Computer Security, Operating Systems, Discrete Mathematics, Theory of Computer Science

EXPERIENCE

SIM Real-Time Driving and Simulator Research Team: *Software Engineer*

November 2024 - Present

- Developed driveable simulations of 5 real-world roadways, including roadways from Ann Arbor to Detroit Airport, using CARLA, Roadrunner, and Unreal Engine
- Programmed GUIs in C and Python for simulation of 10 driving scenarios, improving experiment efficiency by 35%
- Integrated a low-cost motion base into simulations, increasing realism and improving user testing accuracy by 25%

Leetcode Leaderboard: *Software Developer*

November 2024 - December 2024

- Developed a web app to track and display LeetCode user metrics, including number and types of problems solved
- Built a responsive and dynamic UI with React and Axios to fetch and display real-time data for up to 50 users
- Integrated MongoDB for secure storage of user data, enabling future scalability for handling up to 1,000 users
- Deployed on Vercel for scalability and 99.9% uptime, with a Node.js backend proxy to manage API rate limits

Custom MapReduce FrameWork: *Software Developer*

November 2024 - November 2024

- Implemented a Python-based MapReduce framework inspired by Google's original MapReduce paper, achieving distributed processing on a cluster of up to 5 machines
- Developed fault-tolerant systems using multithreading and heartbeat protocols, reducing task reassignment delays by 40% during Worker failures
- Utilized TCP and UDP sockets for inter-process communication, enabling concurrent execution of up to 10 Map and Reduce tasks
- Wrote unit tests for 15 modules, achieving 95% test coverage and ensuring robust fault-tolerant execution

Instagram Clone: *Software Developer*

October 2024 - November 2024

- Developed an Instagram clone using React, client-side JavaScript, and a REST API, enabling dynamic interactions and seamless real-time data retrieval
- Implemented core functionalities including likes, comments, and infinite scroll on the feed page without reloading
- Utilized Day.js for real-time timestamp handling, ensuring that all post displays are in human-readable formats
- Deployed the application on AWS and managed version control via GitHub, collaborating effectively in a group setting

Capital Consulting Group: *Business Analyst & Project Manager*

September 2023 - Present

- Led a team of 5 analysts to provide pro-bono consulting solutions to 2 clients
- Designed 10+ marketing materials and social media templates, driving a 30% increase in client brand awareness
- Built a data collection system and statistical model that optimized client product usage by 80%
- Presented major deliverables with solutions that improved client business operational efficiency by 15%

9 Basil (Thailand): *Data Analyst Internship*

June 2023 - August 2023

- Conducted research on 10 SEA companies and analyzed 3 conglomerates, creating detailed reports on their practices
- Developed data visualizations of company info using Kumu.io, increasing the investment team's decision-making speed by 15%

SKILLS/ADDITIONAL INFORMATION

- **Tools :** Python, C++, JavaScript, SQLite, Flask, React, HTML, CSS, AWS, PostgreSQL, MongoDB, Axios, Git
- **Languages:** English (Native), Thai (Fluent)