

# NAM HAI NGUYEN

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## EDUCATION

**Michigan State University, College of Engineering, Honors College** East Lansing, Michigan  
*Bachelor of Science, Computer Science* GPA: 4.0/4.0 Sep 2022 - Present  
**Coursework:** Data Structures and Algorithms, Object-Oriented Software Development, Database Systems, Computer Organization and Architecture

## TECHNICAL SKILLS

**Languages:** Python, C/C++, C#, SQL, JavaScript/TypeScript, HTML/CSS, Assembly  
**Frameworks:** Express, React, Node.js  
**Libraries:** React Flow, Zustand, axios, mongoose, socket.io, wxWidgets  
**Developer Tools:** Git, Visual Studio Code, Visual Studio, Postman, PyCharm, CLion, Ubuntu, Linux

## TECHNICAL EXPERIENCE

**CourseFlow** [GitHub](#) East Lansing, Michigan  
*Software Developer* Dec 2023 – Feb 2024

- Developed a Full-stack Web Application with **MERN stack** that helps college students map out courses in form of flow chart, leveraging **Topological Sorting Algorithm**
- Utilized **React** and **React Flow** with **TypeScript** to create interactive and captivating node-based web design
- Employed **Vite** development server for client side, significantly accelerating development process by up to **100%** compared to traditional setups
- Implemented **12 API endpoints** to support CRUD operations and ensured seamless interactions between frontend and backend by testing with **Postman**
- Enhanced security by applying **bcrypt** to hash user passwords, safeguarding users' sensitive information from potential breaches

**Michigan State University** [GitHub](#) East Lansing, Michigan  
*Professor Assistant* Sep 2022 - Present

- Cooperated with Prof. Zhichao Cao to refine NELoRa model by experimenting higher Spreading Factor (SF) of 11 and 12, aiming to increase communication range and extend each node's battery life by **272%**
- Utilized **Python** to retrain dual-Deep Neural Networks model for denoising and decoding chirp symbols, leveraging results as benchmarks for further research

**Halloween-Spartan Themed Action Sudoku** [GitHub](#) East Lansing, Michigan  
*Lead Software Developer* Aug 2023 – Sep 2023

- Organized team of 5 students to implement a novel engaging version of Sudoku, taking full advantage of **C++** for backend and cross-platform library **wxWidgets** for an elegant graphical user interface
- Slashed development time by **20%** by maintaining a clear communication and seamless collaboration through **Git** and **GitLab**
- Adhered to **object-oriented design principles**, contributing to efficient launch of final program

**SpartaHack 8: ReTiMe** [GitHub](#) East Lansing, Michigan  
*Software Developer* Jan 2023

- Performed full-stack engineer on Realtime Messaging Web App (ReTiMe) in team of 3 within 48-hour duration of MSU's annual Hackathon, allowing **50** users to access simultaneously
- Developed a space-themed UI using **HTML/CSS/JavaScript** for a visually appealing experience
- Facilitated real-time messaging with **Express.js** and **socket.io** for fast and lively users' interaction