

Theodore Nguyen

theohieun@gmail.com | 612-562-5342 | linkedin.com/in/theodore-n

Education

University of Minnesota – Twin Cities

Minneapolis, MN

Bachelor of Science in Computer Science / GPA 3.63

Expected May 2025

Relevant Coursework: Data Structures and Algorithms, Internet Programming, Intro to Artificial Intelligence, Machine Architecture & Organization, Operating Systems, Database Systems, Program Design & Development, Software Engineering, UI Design

Skills

Languages: Python; Java; C; C++; C#; CSS/HTML/TS/JS; SQL; OCaml

Tools: Azure DevOps; Azure IoT; Docker; Git; Jira; MySQL; VSCode; PostgreSQL; Linux; MatLab; Unity

Work Experience

Bracco Medical Technologies

Eden Prairie, MN

Software Engineering Intern

May 2024 – August 2024

- Designed and developed a client-facing UI using **Angular** and **React** to display cardiovascular injector data as Key Performance Indicators (KPIs), leveraging **Redash** and **PostgreSQL**
- Integrated **REST API** calls to a configured Fast Healthcare Interoperability Resources (FHIR) server populated with synthetic data via a **Python** script to provide customers with real-time analytics
- Deployed both the web application and FHIR server as **Azure IoT Edge** modules, allowing containers to be deployed to downstream devices
- Modified **Azure Pipelines** file to include automated unit testing and linting of the web application which decreased deployment time by **40%** based on testing

Earl E. Bakken Medical Devices Center

Minneapolis, MN

3D Printing and Segmentation Specialist

June 2023 – Present

- Upload 3D models to VR using **Unity** to allow clinicians to view and interact with anatomical models
- Optimize and modify provided STL files to deliver desired models using Prusa, Formlabs, and Stratasys printers
- Worked with 50+ doctors and students to design and prototype their medical inventions and desired anatomical models
- Create 3D models of patient anatomy using CT scans in Mimics to 3D print and help visualize patients' physical condition

Research Assistant

February 2024- Present

- Develop a mixed reality guided nasogastric tube placement program using **Unity** and **OpenPose**, enabling clinicians to visualize tube positioning within the patient's body accurately
- Pipe data from a **Python** program that does body pose tracking to Unity, mirroring real-time body movement

Undergraduate Research Assistant

June 2023 – January 2024

- Used **Unity** to develop a VR surgical trainer for a trochleoplasty that incorporates 3D anatomical models and C# coding to apply scripts to in game objects that allows surgeons and pre-med students to train for a surgery without entering the operating room

Projects

Stock Sentiment Analysis

- Built a real time stock sentiment analysis tool using **NLTK VADER** for sentiment valuation, web scraping from **Beautiful Soup**, **Pandas** for data analysis, and **Matplotlib** to visually portray data analyses.

Spotify Playlist Analysis

- Used **Flask** web framework and Spotify's API to create an OAuth workflow. Specified application scope to read user library data and obtain access and refresh tokens to request data from Spotify's web API
- Converted user playlist data to **Pandas** data frame to display analytics such as total songs, track length, and song names

Bloxorz AI

- Researched and implemented search algorithms to solve the puzzle game *Bloxorz*, analyzing the efficiency of A* search, BFS, and DFS in beating the game comparing time complexity and solution optimality

Extracurricular

SASE Labs

October 2023 – Present

- Work and mentor a team of students to design and engineer a project every year (ex. drone, mechanical heart)