

# Timothy Nguyen

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## EDUCATION

### University of Massachusetts, Amherst

*Bachelor of Science in Computer Science, Statistics & Data Science*

GPA: 3.835

**Relevant Coursework:** Algorithms, Data Structures, Software Engineering, Scalable Web Systems, Computer Network Theory, Databases, Information Retrieval, Data Science, Natural Language Processing, Artificial Intelligence

Amherst, MA

Graduation: May 2022

## WORK EXPERIENCE

### MathWorks

Sept 2021 - Dec 2021

*Incoming Software Engineering Intern*

- Modernizing & Developing JavaScript Web Components for MathWorks products with HTML, CSS, JS & React.

### Dell Technologies

May 2021 - Aug 2021

*Software Engineering Intern for the Edge Solutions Business Unit*

- Collaborated to prototype edge-computing platforms with Litmus Edge and VMware to optimize the manufacturing industry.
- Capture, analyze, visualize, and manage industrial data with Python, Tensorflow, JS, Docker, Postgres, TimescaleDB, and Grafana.
- Innovated ML/Time Series models such as Kalman Filters and SARIMAX to estimate noisy trends from industrial MQTT sensors.
- Monitored and performance tested Litmus Edge within VMware, supporting up to 10,000 industrial automation devices.

### Systems & Technology Research

May 2020 - Aug 2020

*Software Engineering Intern for the Data Analytics Division*

- Designed a Spring Boot/Java REST service to rapidly automate assurance cases & causal models for predictive maintenance.
- Developed Bayesian Networks to support causal model architecture and Uber Model Manager to manage different models.

### BUILD UMass

Sept 2019 - Present

*Software Engineer*

**Github:** <https://git.io/JLpVa>

- Provide non-profits, startups, and local businesses with web and mobile applications through pro-bono engagements.
- Grew organization to over 50 software developers, 20 business developers, and partnered with over 10 clients over two years.
- Led two teams of 8 people with the cofounder of BUILD UMass to develop an auth/user management & forms/surveys system.
- Developing JSON form-building application to customize form-making, filling, as well as drag-and-drop capabilities.
- Employed React for front-end UI, Node/Express.js/MongoDB for backend, along with Redux & Passport/JWT Integration.

### DSC-WAV (National Science Foundation)

Sept 2020 - Jan 2021

*Data Scientist Intern*

**Github:** <https://git.io/JLpab>

- Research to provide better transportation for people with drug addiction to get to treatment centers on an eight-person team.
- Developed visualizations and analyzed the cost-time benefit to get to treatment centers with Python and Google Cloud.

## PERSONAL PROJECTS

### Movie Recommender System

**Github:** <https://git.io/J3J9K>

- Established features such as authentication, movie pages, and movie recommendations through ALS & Collaborative Filtering.
- Developed microservices through React, TypeScript, Node/Express, Postgres, Docker, Nginx, FastAPI, and Spark.

### Project Evaluation Tool

**Github:** <https://git.io/JLpVe>

- Used React, Node.js, Express, MongoDB, and Redux to create simple forms and manage users for Ultimate Software.
- Collaborate on an eight person team to develop mockups, user stories, entity relationship diagrams, and design docs.

### Covid.io

**Github:** <https://git.io/JLpab>

- Developed a Covid-19 dashboard related to cases and deaths with React.js and Charts.js.
- Evaluate political classification through ML/Deep Learning Models on 200,000 covid-19 related tweets from US politicians.

## SKILLS

- Programming Languages: Java, Python, JavaScript, R, C, HTML/CSS, SQL, Linux
- Frameworks: React, Node/Express, Redux, Spring Boot, React Native, NumPy, Pandas, Tensorflow
- Devops: Docker, Nginx, Git, Jira, Postgres, InfluxDB, TimeScaleDB, Grafana.