

Justin Lee

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EDUCATION

University of Minnesota

B.S. in Computer Science

Relevant Courses: Discrete Mathematics, Linear Algebra, Machine Architecture and Organization, Advanced Programming Principles, Algorithms & Data Structures, Developing the Interactive Web, Intro to Operating Systems, Practice of DB Systems, Program Design & Development, Remote Sensing and Geospatial Analysis of Natural Resources and Environment

Minneapolis, MN

Sep. 2021 - May 2025

TECHNICAL SKILLS

Languages: JavaScript/TypeScript, Python, Java, C, HTML/CSS, SQL, R

Frontend: React, HTML5, CSS3, Canvas API, Responsive Design

Backend: Node.js, Express, Flask, RESTful APIs, Serverless Functions

Databases & Cloud: MongoDB, PostgreSQL, Firebase, Azure, Vercel, Netlify

Tools & Libraries: Git, Linux, Auth0, NumPy, Pandas, Matplotlib, Scikit-learn

APIs: Web Audio API, Canvas API, Google Maps API, OpenAI GPT API

PROJECTS

Full-Stack Task Manager | ReactJS, Node.js, MongoDB, Netlify Functions

[\[Github\]](#) [\[Demo\]](#)

- Built complete CRUD web application with React frontend and serverless backend using Netlify Functions.
- Implemented RESTful API with MongoDB for task storage with create, read, update, and delete functionality.
- Deployed production application on Netlify with responsive design and CORS-enabled API endpoints.

Audio Pitch Shifter | JavaScript, Web Audio API, Canvas API, Vercel

[\[Github\]](#) [\[Demo\]](#)

- Developed web audio player with speed/pitch control, real-time waveform visualization, and playlist management.
- Implemented custom linked list data structure for efficient playlist operations and audio buffer handling.
- Deployed production application with responsive design and WAV export functionality.

Fake News Detection | Python, Scikit-learn, Pandas, Matplotlib, Jupyter Notebook

[\[Github\]](#)

- Built machine learning model to classify news articles as real or fake with 100% accuracy on test data.
- Engineered features from article titles, content, and metadata using TF-IDF vectorization techniques.
- Analyzed 44,898 news articles and identified key patterns distinguishing fake from authentic content.

SafeRoute (Team of 5) | ReactJS, Google Maps API, MongoDB, Microsoft Azure

[\[Github\]](#)

- Built a web application that maps high-crime areas near campus to promote safer navigation.
- Developed a ReactJS front-end with Google Maps API overlays for real-time visualization.
- Designed a scalable backend using MongoDB and Azure to support multiple users reliably.

Virtual Community Planner (Team of 5) | Auth0, GPT, Python, JavaScript, MongoDB

[\[Github\]](#)

- Developed a collaborative scheduling and meal planning platform with GPT-powered suggestions.
- Implemented calendar features with daily, weekly, and monthly views for group usability.
- Integrated Auth0 authentication for secure, role-based multi-user access.

EXPERIENCE

University of Minnesota

Project Assistant - Research Facility Support Services (RFSS)

May 2023 - August 2023

Minneapolis, MN

- Developed and optimized alarm configuration systems for 500+ lab instruments.
- Automated data entry workflows for Oceansoft sensor integrations, reducing manual workload and improving consistency.
- Collaborated with researchers, engineers, and lab managers to deliver technical solutions on schedule.