

Phuong H. Nguyen

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SUMMARY

Master's student focusing on Data Science, AI and a top 2% CS graduate. I build data and software-driven systems that turn messy information into clear insights, helping teams make better decisions and improve customer growth and retention. I've developed scalable tools and intuitive applications, and I'm currently researching Agrivoltaics: how solar energy and crop agriculture can share land to boost productivity and sustainability.

PROJECTS

AI Analyst for Customer Growth & Retention | [LINK](#)

- Built a full-stack FastAPI + React analytics chat app that lets business users ask natural-language questions on their Retail dataset and get instant, explainable growth and retention insights.
- Implemented CLV and churn analytics (BG/NBD, Gamma-Gamma, Cox, Kaplan-Meier, Monte Carlo ERL) behind clean REST APIs so the AI assistant can surface customer value, churn risk, and retention buckets on demand.
- Orchestrated an LLM agent layer (LangChain/LangGraph, conversation memory, read-only SQL tools, caching) to reliably route queries to SQL and Python analytics, improving response speed and usability for non-technical users.

Disney Database | [LINK](#)

- Scraped and engineered a dataset of 600+ films, adding enriched attributes for analysis.
- Performed EDA and visualization to identify trends in ratings, revenue, and genre patterns; generated insights communicated through dashboards.

Music Streaming Platform | [LINK](#)

- Developed a responsive web app with React + TailwindCSS where users upload, organize playlists, and stream music files stored securely in Firebase with MongoDB metadata management.
- Built full-stack Node.js/Express API handling authentication, file uploads, and playback controls to deliver smooth, Spotify-like experience across desktop and mobile.

Event Planning App | [LINK](#)

- Built a mobile-first event planning app in Android Studio with Spring Boot backend to simplify group coordination, and real-time communication for organizers and attendees.
- Designed MySQL database for events, attendees, schedules, and notifications, delivering seamless sync between the Android frontend and REST API for multi-user collaboration.

WORK EXPERIENCE

Research Assistant – Data Science & Analytics | [LINK](#)

June 2025 - Present

Iowa State University, Ames, IA

- Designed full analytics pipeline for 1M+ solar-power/microclimate records, cutting prep time 70% via automated cleaning/feature engineering.
- Built statistical/ML models revealing 2-5% energy differences by crop type, driving 10-acre agrivoltaics redesign.
- Engineered temporal/environmental features + dashboards accelerating research iteration from hours to minutes.

EDUCATION

Iowa State University - Ames, IA

Expected 2027

- **Master of Science, Computer Engineering**
- Courses: Big Data Analytics, Deep Learning, Machine Learning, Statistical Modeling, Algorithms, Databases

Iowa State University - Ames, IA

May 2025

- **Bachelor of Science, Computer Science**
- Graduated **Top 2%** (Highest 2% Senior)
- Awards: **First Prize - Software Design Projects, Best Coder Award**