Kanishk Dendukuri

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EDUCATION

University of Wisconsin - Madison — Madison, WI
B.S. in Mathematics & Computer Science with Honors, GPA: 3.9 — *May 2025*

Relevant Coursework: Algorithms, Data Structures, Machine Architecture, Combinatorics, Machine Learning, Numerical Analysis, Applied Linear Algebra, Probability and Statistics, Discrete Mathematics, Calculus I-IV

EXPERIENCE

Computational Optics Group — Madison, WI
Undergraduate Research Assistant — *Jan. 2024 – Present*
- Implemented back-projection algorithms utilizing multithreading techniques and interfacing algorithms in C++ and MATLAB for real-time recovery of 3D representations of hidden objects around walls.
- Continuing research in Non-Line-of-Sight Imaging to deepen understanding and explore advancements in the field.

Innocito — Dallas, TX
Software Engineer Intern — *Jul. 2023 – Sep. 2023*
- Developed 7 RESTful APIs for a registration app using Springboot integrated with an SQL Database.
- Conducted thorough testing of APIs using JUnit framework and Postman, ensuring robustness and reliability.

Small Satellite Research Lab — Minneapolis, MN
Undergraduate Research Assistant — *Nov. 2022 – May 2023*
- Worked on U.S. Air Force sponsored project focusing on the development of CubeSats, scheduled for launch in 2024.
- Conducted unit testing in Python to ensure accurate data transmission between the ground station and cube satellite

Hindu Society of Minnesota — Maple Grove, MN
IT Intern — *Sep. 2022 – May 2023*
- Designed an iOS application using Swift aimed at improving communication with temple attendees.
- Enhanced organization's website, including live streaming feature, resulting in a 300% increase in traffic.
- Engineered and deployed workflow automations, effectively enhancing cross-committee productivity.

PROJECTS

Quizzify, Best Use of LLMs @ HackUIowa | *Flask, Python, TypeScript, React, NLP, OpenAI, OCR, HuggingFace*
- Built a web application to transform text into various quiz formats and comprehensive summaries, beating 68 teams.
- Led backend development using Flask and Python; integrated LLMs and prompt engineering to deliver standardized outputs for user display to the frontend.
- Assisted in frontend development using React, Next.js, ChakraUI, and TypeScript, focusing on facilitating the display of outputs from backend technologies such as BERT (LLM/NLP), and pytesseract (OCR).

Heart Disease Detector | *NumPy, Pandas, Scikit-Learn, Mathplotlib*
- Engineered a heart disease detection model using logistic regression, achieving an 89% accuracy on test data.
- Utilized Pandas for efficient data handling, preprocessing, and extraction of relevant features.
- Employed Sklearn's Recursive Feature Elimination to identify and select crucial features; incorporated StandardScaler for optimal feature standardization, enhancing model accuracy and reliability.

Astro Portal and Spelunk Knight | *Swift, SpriteKit, SwiftUI, TestFlight*
- Developed two iOS platformer games using Swift, SpriteKit and MVVM architecture.
- Successfully published the apps to the App Store, resulting in 1k downloads and 200k+ impressions.

TECHNICAL SKILLS

Languages & Tools: Java, Python, C/C++, TypeScript, MySQL, Swift, R, MongoDB, GitHub, HTML/CSS
Frameworks: SpringBoot, Flask, React.js, Node.js, JUnit, SpriteKit, SwiftUI, UIKit
Libraries: Pandas, NumPy, Matplotlib, Spring Web, Spring Data, Spring Security
Certificates: Introduction to Data Science in Python (University of Michigan), Supervised Machine Learning (Stanford)