Maya Pandya

Rockford, IL ❖ maya.pandya1114@gmail.com ❖ (815) 505-0222

EDUCATION

Northwestern University | Evanston, IL December 2024

MS, Computer Science | BS, Biomedical Engineering

- GPA: 3.8.
- Relevant Coursework: Data Structures and Algorithms | Computer Systems | Machine Learning | Data Privacy | Cryptography | Human-Computer Interaction.

WORK EXPERIENCE

VivaMedical | Cape Town, South Africa January 2024 - March 2024

Project Lead/Researcher

- Constructed an AWS-based data pipeline (S3, Glue) to analyze cost data and compare locally produced needleless valves with imported products, identifying potential savings of up to 30% from local production.
- Led clustering analysis and predictive modeling using SageMaker to target hospitals most impacted by injury rates and budget constraints, ensuring data-driven decision-making for cost-effective safety solution deployment.
- Delivered actionable insights and recommendations aligning with VivaMedical's mission to improve hospital safety, reduce costs, and optimize resource allocation across South Africa.

Northwestern University | Evanston, IL May 2023 - August 2023

Biomedical Software Research Intern

- Developed and modified reinforcement learning algorithms in Python, increasing decision-making simulation accuracy by 8% in dynamic environments.
- Examined impact of environment visibility on decision-making accuracy, conducted experiments, and refined models to enhance neural simulation effectiveness.
- Presented model findings to interdisciplinary teams to guide design decisions.

Center for Innovation in Global Health Technologies | Evanston, IL June 2022 - August 2022

Biomedical Engineer - Product Development

- Engineered a passive blood separator for the DASH platform, enhancing rapid PCR testing process for infectious diseases including HIV and Hepatitis B, while coordinating tasks to achieve project milestones.
- Transformed product design through iterative prototyping and validation experiments, resulting in a 20% increase in blood separation efficiency compared to initial prototype.
- Documented progress and findings in formal research reports, ensuring clear communication of methodologies and outcomes to stakeholders and contributing to future project iterations.

PROJECTS

UV Monitoring Wearable for Melanoma Survivors Fall 2024

- Engineered a wearable device with real-time UV tracking and algorithms for personalized sun protection using C++, integrating a mobile app built with React to display UV levels, exposure history, and tailored recommendations for melanoma survivors.

Adversarial Game AI Development Fall 2023

- Designed intelligent agents using Minimax and Alpha-Beta Pruning to optimize gameplay strategies in the Konane game, with interactive and automated testing modes for performance evaluation.

Open Street Map Navigation System Spring 2023

- Developed a C++ backend to process and analyze large Open Street Map datasets, including nodes and footways, using Dijkstra's algorithm for refined route planning on the Northwestern University campus.

TECHNICAL SKILLS

- Programming: Python | C/C++ | HTML/CSS/JavaScript | SQL | MATLAB.
- Systems and Technologies: AWS (S3, Lambda, API Gateway, SageMaker) | Microservices | MySQL | Serverless Architecture | Node.js | RESTful APIs | Docker | Pytest | Git.