Pranav Viswanathan

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Education

Northeastern University, MS in Computer Science (expected grad: Dec 2026)   Sept 2024 – Present

Vellore Institute of Technology, B.Tech in CS with Spec. in Cyber-Physical Systems   Sept 2020 – March 2024

Experience

Project Intern, Nergy Live   May 2023 - Feb 2024

- Developed an anomaly detection system for HVAC systems, enabling early identification of issues and enhancing overall system performance and reliability.
- Achieved significant improvements in site usability metrics within three months by integrating data visualization tools for actionable insights from real-time system monitoring.

Research Intern, National Institute of Technology Trichy   Sep 2022 - Mar 2023

- Designed and implemented a machine learning model to detect and mitigate DDoS attacks on cloud networks.
- Enhanced network security by implementing real-time threat detection and response mechanisms.
- Collaborated with a cross-functional team to optimize model performance and reduce false positives.

Projects

Image Processing and Transformation Toolkit   Java, Spring, JUnit 4

- Developed tools for image compression, color correction, histogram analysis, and level adjustments to enhance image quality and reduce storage requirements.
- Enabled scripting for batch processing and streamlined workflows, allowing for effecient image manipulation tasks.
- Implemented split-view transformations, allowing visual comparison of edits, and added functionalities for generating histograms and aligning color peaks for precision edits.
- Wrote extensive tests with a collaborative team to ensure optimal functionality of the tool.

PranavOku   Flask, Docker.

- Developed a system that dynamically allocates virtual machines and hosts static websites, reducing manual server management time by 40%
- Achieved a 30% improvement in efficiency by implementing automated VM scaling for optimized resource use
- Enabled users to deploy and manage over 100 web applications, expanding cloud infrastructure capabilities with automated VM scaling and distributed system design

Project Asclepius   Django, Requests, redis

- Engineered a robust, decentralized system to unify patient medical histories across multiple hospitals, enabling seamless access to critical information for first responders and emergency departments
- Streamlined healthcare data management processes, enabling accurate diagnoses and personalized treatment plans through comprehensive, integrated patient records

Technologies

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS, R
Frameworks: React, Node.js, Flask, JUnit, FastAPI, Spring Boot
Other Skills: Scalable Systems, Distributed Systems, Redis, Postgres, Relational databases, Kubernetes