Poojan Patel

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EDUCATION

University of Maryland — **May 2026**
Bachelor of Science in Computer Science — *College Park, MD*

- University Scholars
- Relevant Coursework: Interactive Robotics and Embodied AI, Advanced Data Structures, Machine Learning, Algorithms, Object-Oriented Java Programming, Computer Systems, Human-Computer Interaction, Web App Development

EXPERIENCE

ADCI — **June 2025 - August 2025**
Software/Project Management Intern — *Ellicott City, MD*

- Moved confidential operational documentation from hard-drive storage to a secure Firebase cloud platform, reducing office-return trips and saving onsite engineers approximately 2 hours per day.
- Engineered a secure, production-ready web application that centralized car logs, project files, and operational documentation with role-based access controls to protect sensitive company data.
- Collaborated with stakeholders and onsite teams in Charleston (WV), Philadelphia (PA), and Baltimore (MD) to scope requirements, launch the system company-wide, and integrate the tool into daily construction project workflows.

IT Solutions Point Web — **June 2024 - August 2024**
Software Intern — *Columbia, MD*

- Organized large volumes of archived medical records by indexing them under patient IDs, enabling fast and accurate retrieval of patient information and supporting smoother clinical and administrative workflows.
- Built scripts to automatically categorize newly generated patient data, ensuring all new records were easily searchable.

PROJECTS

Embodied AI Desk Companion Robot | *Python, Raspberry Pi, Fusion360, ROS2*

- Created a stress-reducing desk-lamp companion designed to improve user wellbeing by detecting mood and interacting expressively, automating tasks, and leveraging LLMs to answer questions and boost productivity.
- Delivered a functional desktop robot form factor by designing and 3D-printing custom housings that conceal wiring, support full motor range, and provide clean placement for sensors and hardware.
- Enabled intelligent real-time interaction through a Raspberry Pi–powered system featuring face tracking (OpenCV), a 2-degree-of-freedom neck mechanism using ROS2, and integrated microphone–speaker for voice communication.

Music Discovery App | *React, Git, HTML, JavaScript*

- Developed a full-stack music discovery web application featuring a Tinder-style swipe interface for browsing Spotify tracks and allowing users to save liked songs into personalized playlists.
- Used Spotify Web API to fetch real-time artist and track data.
- Implemented secure user authentication and session management with MongoDB session storage, and built RESTful API endpoints using Express.js and Node.js to support registration, login, playlist management, and personalized song discovery.
- Designed and deployed a responsive front-end using CSS, and launched the application on Render with MongoDB Atlas, managing environment configuration, and production-grade security best practices.

Flappy Bird | *Python, Pygame*

- Engineered a complete 2D arcade game with real-time physics engine handling gravity, terminal velocity, and momentum-based control
- Architected modular, object-oriented codebase with separate classes for game entities (Bird, Pipe, Star) and centralized game loop management

Calculator | *Java, Regex*

- Engineered a Java-based scientific calculator with support for 8 arithmetic and mathematical operations, featuring input validation and error handling.
- Created an interactive CLI calculator application demonstrating proficiency in Java fundamentals, control flow, and the Math library.

TECHNICAL SKILLS

Languages: Python, Java, C/C++, Javascript, HTML, CSS, OCaml, Rust, TypeScript
Developer Tools: Git, Vim, ReactJS, NodeJS, ROS, Firebase
Libraries: pandas, NumPy, Matplotlib, Dask