BAZIL AKRAM

Harrisburg, PA |717-409-4050 | mbazilakram@gmail.com | https://bazilakram.github.io

Recent CS grad with strengths in computer vision, full-stack development, and workflow automation. Proven track record building ML-backed research tools and operational dashboards.

Experience

Computer Science Intern, *Penn State Health — Jan 2024 – May 2025*

- Designed and shipped user data management app for physician workflows, supporting live edit/view.
- Automated internal document handling using Power Automate and SharePoint, reducing manual load for staff.
- Developed DSST-based cognitive assessment interface now in use by internal research teams.
- Evaluated DB technologies for long-term scale-up of internal records system; contributed to tool migration plan.

Projects

Rodent Trajectory Tracker (Capstone)
Python, OpenCV, DeepLabCut, OpenCV.js

- Built a CV pipeline to detect and track a rat's head and limbs across maze videos using DeepLabCut.
- Reduced human labeling effort by overlaying predictions on video in real-time using OpenCV.js and a custom canvas layer.
- Developed CSV-to-video playback tool with toggleable overlays (trails, segmentations, grid).
- Deployed front-end interface enabling research teams to adjust playback speed, filter segments, and export video.

Cognitive Abilities Testing Tool
Power Apps, Power Automate, SharePoint

- Created DSST-style cognitive testing platform used by clinicians for behavioral evaluation and scoring.
- Automated scoring and data logging pipelines using Power Automate, enabling data sync with SharePoint lists.
- More than halved testing workflow time with real-time scoring and clinician-friendly UI.

Tenant Maintenance Request System
React, Node.js, SQL, JavaScript

- Built full-stack request management system with separate user roles (tenant, admin, maintenance team).
- Designed modals for request creation and status tracking with real-time database sync.
- Enabled tenant transfers, account deletion, and team reassignment through a unified admin panel.
- https://github.com/BazilAkram/Maintenance-Request-System

SUN Lab Access System
Node.js, SQL, HTML/CSS, Python, TKinter

- Developed front-end and back-end logic to log students in/out of computer labs and record time entries.
- Built audit trail functionality and account control panel with suspension/reactivation toggles.
- https://github.com/BazilAkram/SUN-Lab-Access-System

User Dashboard + Data Filtering Tools
React, REST APIs

- Created dynamic user dashboard pulling from a fake user API with real-time filtering by multiple attributes.
- Enabled profile card rendering with expandable metadata and responsive layout.

3D Tetrahedron Generator
Three.js, Vite

- Built recursive 3D tetrahedron stacker using vector math and WebGL for shape rendering.
- Controlled recursion depth and display parameters via real-time UI inputs.
- https://github.com/BazilAkram/tetrahedron-generator

Education

Pennsylvania State University
B.S. in Computer Science — May 2025

Technical Skills

Languages: Python, JavaScript, TypeScript, SQL, C++, Java, C, MIPS, C#, SQL, MIPS
Frameworks: React, Node.js, Next.js, Django, Three.js
Tools: Power Platform, SharePoint, Git, OpenCV, YOLO, DeepLabCut

Awards

• Witham Trustee Scholarship — Merit-based academic award

• CWC First Year Award — Selected for top first-year academic performance