RISHIK PANJUGALA

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EDUCATION

The Ohio State University, Columbus, OH Expected Graduation: 2028
B.S. Computer Science & Engineering

TECHNICAL SKILLS

Programming: Python, Java, JavaScript, TypeScript, SQL, Lua, HTML/CSS
Frameworks & Libraries: React, Three.js, MediaPipe
Machine Learning / Data: PyTorch, NumPy, Pandas, XGBoost, LightGBM, Snowflake
AI / LLM: IBM watsonx Orchestrate, IBM Granite, Claude API, Gemini Live
Cloud / Software: AWS Lambda, API Gateway, Amazon S3, CloudWatch
Databases: PostgreSQL
Developer & AI Tools: Git, GitHub, VS Code, Cursor, OpenAI Code

PROJECTS

OSU Campus Energy 3D Visualizer | 1st Place, Data I/O 2026 - Advanced Track

- Developed an interactive 3D campus energy visualization using React, Three.js, TypeScript, and JavaScript to explore building-level energy consumption and historical trends.
- Built a Python data pipeline to clean, analyze, and transform campus energy datasets into optimized, lightweight data for responsive 3D visualization and consumption forecasting.

Coastal Flooding Forecasting System | 1st Place, HackAI 2026 - Scientific Mood Fair Challenge

- Built a reproducible Python training and inference pipeline with Pandas, NumPy, XGBoost, and LightGBM to predict 14-day flooding risk from rolling 7-day windows of hourly sea-level data.
- Engineered preprocessing and time-series features, evaluated generalization to unseen tide-gauge stations with leave-one-station-out cross-validation, and calibrated probability outputs under runtime constraints.

EagleEye - Highway Camera Crash Detection | 1st Place, Claude Builders Club @ OSU Hackathon - Open Track

- Built an end-to-end multimodal AI service that analyzed roadway camera images with the Claude API and returned structured JSON alerts with incident details and recommended police, fire, EMS, or towing response.
- Integrated AWS Lambda, API Gateway, Amazon S3, and CloudWatch with input validation, retries, timeouts, and logging for reliable AI API operation.

NextTerm - AI Course Scheduler | 2nd Place, IBM-sponsored AI Hackathon @ OSU - General Track

- Orchestrated IBM watsonx and Granite to extract structured tags from course and professor feedback - including workload, teaching style, grading, and attendance - and generate explainable recommendations.
- Implemented constraint-aware decision logic to create personalized, conflict-free schedules from student preferences, course data, and scheduling constraints.