

Devansh Khandelwal

765-543-7885 | khanded@purdue.edu | github.com/devanshkhandelwal | linkedin.com/in/devkh

Education

Purdue University

May 2027

Bachelor of Science in Computer Science and Data Science (GPA: 3.82 / 4.00)

West Lafayette, IN

- **Relevant Coursework:** Data Mining & Machine Learning, Algorithms, Software Engineering, Systems Programming, Information Systems, Artificial Intelligence, Multivariate Calculus, Linear Algebra, Game Theory
- **Minors:** Mathematics, Behavioral Economics

Experience

Purdue Engineering

May 2025 – Present

SURF Researcher - WCD Lab

West Lafayette, IN

- Built spatio-temporal CNNs on 165k+ climate samples for atmospheric blocking and heatwave prediction using multi-day inputs and physics-informed constraints.
- Transferred CESM-LENS climate knowledge to ERA5 reanalysis, achieving $\geq 92\%$ balanced TPR/TNR across lead times up to 12 days.
- Applied XAI (IXG, IG, GradCAM, LRP) to isolate anticyclone evidence, showing attribution maps aligned with upstream AC tracks for interpretable blocking-onset forecasts.

Hack the Future

Aug 2024 – Present

Team Lead and Club Treasurer

West Lafayette, IN

- Directed 10+ developers in a national non-profit software initiative, delivering a full-stack event platform with calendar sync & accessibility features, adopted by 200+ participants across biweekly events.
- Established CI/CD pipelines and automated testing, ensuring reliable deployments and reducing integration issues.
- Led weekly meetings mentoring teammates on Git, APIs, Agile and MERN stack development.

Purdue Vertically Integrated Projects

Aug 2024 – Dec 2024

ML Engineer - VIPER Lab

West Lafayette, IN

- Achieved 94% accuracy on 5k+ chess images using a neural network; automated square detection ($R^2 = 0.984$).
- Implemented core CV algorithms (Canny, Otsu's Thresholding & Morphological Dilation) from scratch.

Cisco

Jan 2024 – May 2024

Undergraduate Researcher

West Lafayette, IN

- Engineered 2-stage hierarchical demand forecasting models, improving accuracy by 15%.
- Collaborated with the Metrics and Evaluation team to define KPIs for production adoption.

Projects

Attention-Based SAC Portfolio Allocator with Regime Detection | Python, PyTorch, Gymnasium, yFinance, Pandas

- Developed SAC agent with multi-head attention, improving Sharpe ratio by +6.6% over equal-weight baselines.
- Implemented regime-aware rewards with interpretable attention, outperforming SPY-only by 30%+.
- Delivered a production-ready system with attention-weight visualization, dynamic exploration strategies, and multi-seed validation.

NutriBuddy | MongoDB, Express.js, React.js, Node.js, Material-UI, Llama API

- Built a full-stack nutrition tracking platform, leveraging Llama 3.1 8B Instruct API to generate AI-powered recipes.
- Established personalized nutrition planning and pantry features based on the Total Daily Energy Expenditure.

Technical Skills

Programming & Frameworks: Python, Java, C++, JavaScript, SQL, C, MERN, Django, Next.js, Material-UI

ML & Tools: PyTorch, TensorFlow, PostgreSQL, MongoDB, Git, Linux, Vercel, CI/CD

Leadership Skills

- **Undergraduate Teaching Assistant:** Taught 2000+ students across CS 180 (Java), CS 182 (Discrete Math), CS 240 (C); led labs, held office hours, graded assignments and provided academic support.
- **Organizer and Mentor:** Hello World Hackathon (2024, 2025), guided freshman students through their first hackathon.