

# Mohit Manna

[tinyurl.com/mohit542](https://tinyurl.com/mohit542) | [linkedin.com/in/mohit542](https://linkedin.com/in/mohit542) | [github.com/MohitManna-2006](https://github.com/MohitManna-2006)

## EDUCATION

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### Purdue University

May 2027

BS Computer Engineering

Minor: Math & Finance

- **Coursework:** Advanced Circuits · Data Structures · System Design
- **Organizations:** Vertically Integrated Projects · Data Mine (CAT) · Embedded Systems

## EXPERIENCE

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### Caterpillar | *Data Science Researcher*

Aug 2025 – Present

- Improved CAT supply-chain forecast accuracy by 15% by training a decoder model
- Reduced model latency by 10% through an ETL pipeline for demand forecasting
- Minimized manual analyst work by 6 hours/week using an automated Power BI dashboard

### Purdue Stack | *Software Developer*

Sep 2024 – Present

- Built REST APIs to generate TA assignments for 200+ TAs across 30 math sections
- Shipped a weighted matching engine for TA scheduling, cutting 3+ hours of manual work
- Secured admin access control with stateless JWT auth and role-based permissions for 6 departments

### MySphere | *Software Developer Intern*

Jun 2025 – Aug 2025

- Implemented speech-to-text workflow using Node/Express, increasing task completion for 300 users
- Refactored Express auth APIs with JWT middleware, raising successful sign-ins by 1,200+ sessions
- Optimized React Native screens intended for senior citizen users, reducing taps per task by 20%

### Creative Capital | *Software Engineer Intern*

Mar 2025 – Aug 2025

- Automated Node + SendGrid onboarding workflows, reducing manual investor verification time by 25%
- Deployed Supabase APIs with row-level security, reducing average query latency by 240 ms
- Built React dashboard views for investor profiles and recommendations, used by 100+ accounts

## PROJECTS

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### Backend Engineer – *Google Developer Group*

- Architected a Chrome Extension to scan calendars for tasks and automate reminders, used by 200+ students
- Added background sync with smart desktop alerts, reducing manual tracking time by 30%

### Firmware Engineer (BB-8 Robot) – *Embedded Systems Club*

- Implemented C firmware for microcontroller units, boosting wireless communication range by 4 meters
- Developed drivetrain–sensor interface for motion control, enabling 40 synchronized robot actions/min

### Python Researcher – *Integrated Photonics Lab*

- Developed automated Python ETL pipeline for 10,000+ waveguide simulations, cutting analysis time by 18%
- Awarded 1st place of 200 at Purdue Research Symposium for 99.7%-accurate waveguide efficiency simulations

## SKILLS

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- **Languages:** Python · TypeScript · Java · C/C++ · SQL · R
- **Frameworks:** React · Next.js · Django · Express.js · MongoDB · Flask
- **Tools:** Git · Docker · AWS/Azure · Firebase · Kubernetes · Jenkins · Vercel · PyTorch