Pradyun Bachu

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Education

University of Wisconsin - Madison Madison, WI

Bachelor of Science in Computer Science, Economics with Mathematics Emphasis *May 2027*

- **Relevant Coursework:** *Data Structures and Algorithms, Discrete Mathematics, Linear Algebra, Probability and Statistics, Intermediate Micro/Macroeconomics, Calculus III, Computer Engineering*
- **Clubs and Activities:** *Wisconsin Autonomous, Federal Reserve Challenge Club, Indian Student Association, Project Management Club*

Experience

Data Analyst Intern May 2025 – August 2025

United Nations: DESA *New York, NY*

- Built Python/SQL pipelines using NumPy and Pandas to clean and integrate 3+ global NDC and UN climate finance datasets for middle income countries, standardizing country and time keys to enable consistent cross-country analysis
- Produced 9+ analytical reports for senior economists (including Rashmi Banga and Lana Basneen Zaman) on climate finance flows and the socio-economic implications of AI in developing countries
- Developed a Streamlit dashboard that visualize 10+ key indicators (e.g., climate finance per capita, NDC progress, funding gaps) and projected NDC completion rates, enabling policy teams to quickly compare country scenarios for internal briefings

Event Day Judge & Logistics Team Lead 2020 – 2025

PeddieHacks *Hightstown, NJ*

- Led a 35+ member logistics team to execute a 48-hour hackathon for 200–300+ participants annually
- Managed outreach to 15+ sponsors, 12+ judges, and 3+ workshop speakers each year, expanding prize funding from $50,000 to $183,000
- Served as event judge, pre-screened submissions, and live-judged 30+ finalist projects to determine winning teams
- Optimized event workflows, resulting in increased participant engagement and consistent yearly growth in prize pool and attendance

Senior Engineer September 2021 – May 2024

Peddie Robotics *Hightstown, NJ*

- Designed and machined key FRC subsystems using Autodesk Inventor, Onshape, and vCarve Pro, improving drivetrain reliability and reducing maintenance downtime during competition
- Developed mechanical prototypes that increased cycle speed and scoring efficiency, and collaborated on autonomous tuning to improve reliability across multiple seasons
- Mentored underclassmen in mechanical design, machining workflows, and match data scouting, improving team knowledge transfer and operational efficiency
- Contributed to team success at the FIRST World Championship (Milstein Division Winner 2023, Hopper Division Finalist 2024), 3× Mid-Atlantic Championship, and 6x Mid-Atlantic District titles

Projects

Redline | *Python, React, YOLOv8, Groq LLM, OpenCV* November 2025 – Present

- Developed a full-stack web application using YOLOv8 computer vision to detect vehicle damage from a dataset of 3000+ images
- Implemented severity classification and cost estimation with detailed repair cost breakdowns
- Developed Flask REST API backend and React frontend with real-time damage visualization
- Integrated Groq LLM conversational agent for natural language customer support

Skills & Interests

Programming Languages: Java, Python, R, JavaScript, HTML/CSS
Frameworks: React, Flask, JUnit, JavaFX
Developer Tools: Git, Google Suite, Microsoft Office, Tableau, Autodesk Inventor, vCarve Pro, Onshape, VS Code, Visual Studio, IntelliJ, Eclipse, Google Colab
Libraries: Pandas, NumPy, Matplotlib
Interests: Music, Fantasy Football, Poker, Madden, NBA 2K, Gym