Ayush Gupta

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EDUCATION

Temple University   **August 2023 – December 2026**

Bachelor's, Data Science & Computer Science   *GPA: 3.77*

RELEVANT COURSES

Discrete Math, Data Structures and Algorithm, Principles of Data Science, Data-Intensive & Cloud Computing, Introduction to Systems Programming and Operating Systems

TECHNICAL SKILLS

Programming Languages: Python, HTML & CSS, JavaScript, C\C++, Java, Rust, SQL, NoSQL

Tools/Framework: Django, Node.js, React, Next.js, GraphQL , Redis, Docker, Git, AWS, Numpy, Sci-Kit Learn

WORK EXPERIENCE

Hearth   **Philadephia, PA**

Machine Learning Engineer | Python, Numpy, Sci-Kit Learn, NLP, Deep Learning   *February 2025 – Present*

- Designed and developed a **machine learning model** aimed at simulating medical expert decision-making for diagnostic and treatment recommendations
- Integrated large-scale medical datasets to train and validate the model using **NLP and deep learning techniques**
- Implemented **Reinforcement Learning with Human Feedback (RLHF)** to fine-tune model responses based on feedback, improving accuracy and alignment with expert-level medical reasoning

Temple University   **Philadephia, PA**

Full-Stack Web Developer | Rust, Next.js, SQL, Docker   *March 2024 – Present*

- **Engineered a website** Fanalli, to prioritize the true fans of music for concert tickets using **Rust**
- **Designed and implemented a sophisticated scoring algorithm** that analyzed Spotify and concert history data, improving ticket access accuracy and user satisfaction
- **Reduced deployment time by 25%** using **Docker** for streamlined code deployment

Temple University Robotics Club   **Philadephia, PA**

Lunar Bot Developer| C\C++   *September 2023 – May 2024*

- Worked in a **team of 15 to build an autonomous robot** that placed **21st out of 50 at NASA Lunabotics**
- **Increased navigation reliability** by integrating real-time camera and sensor data using ROS's C/C++ library
- **Reduced collision rates** by refining the obstacle detection and avoidance systems

WhizCo   **New Delhi, India**

Software Developer Intern | Python, Django, SQL, Next.js, Redis   *June 2022 – August 2022*

- **Developed and optimized an endpoint** that enabled clients to query relevant influencers from a database of over **100K users**, improving influencer selection speed and accuracy
- Teamed with 5 other developers to boost profile accuracy by **developing background task workers** that synchronized influencer profiles from Instagram and YouTube using **Django & Redis**
- **Improved user retention by 20%**, as tracked through in-app usage metrics, by designing and implementing a real-time notification and chat system

TECHNICAL PROJECTS

Rusty | *Rust*   *December 2024 – Present*

- Developing "Rusty," an object-oriented programming language written in Rust, featuring dynamic typing for flexibility and ease of use
- Designed and implemented a lexer and parser to enable efficient syntax analysis and interpretation
- Building a custom garbage collector using the mark-sweep technique to manage memory effectively