

Debo Jyoti Paul

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EDUCATION

UNIVERSITY OF WISCONSIN - MADISON

MADISON, WI

BACHELOR OF SCIENCE - COMPUTER SCIENCE, DATA SCIENCE (GPA: 3.64/4.00)

JAN 2024 - MAY 2026

Database Systems, Data Structures, Algorithms, Quantitative Methods, Computer Engineering, UI/UX, Research Statistics, Data Analysis, Artificial Intelligence, BigData Systems, Machine Organization, Computer Programming, Data Modeling & Visualization, Machine Learning, Deep Learning - Computer Vision, Operating Systems. **Awards:** *MJLSP Hackathon Runner-Up 24; Scholars Award 24.*

WORK EXPERIENCE

Software Developer Intern

4P MARKETING CONSULTANCY

Mar 2024 - Aug 2024

- Designed and built an **Android app** for monitoring and data gathering for over **4,000** daily users with *Java and XML*.
- Created pipelines to **gauge data collection** quality using geofencing, facial recognition, and pixel pattern detection.
- Automated** data processing to eliminate production bottlenecks, and developed an **algorithm** with **95% accuracy** to process data using *Google Vision and Python*, and proposed an option to **reduce operation costs** by over **50%**.
- Deployed a script to map file directories, re-categorize files, avoid duplicate overwrites, and **generate detailed reports**.

ML Research Asst.

DATA ANALYSIS & INTELLIGENT SYSTEMS GROUP

Sep 2023 - May 2024

- Conducted literature reviews, **developed strategies** for meaningful output, and built a lightweight personality detection **model** (97% acc.), using Kmeans, an MLP framework and Grid Search from *Sklearn*.
- Identified steps to **reduce errors by 8%** in prev. models, built a new model **~200x smaller, and 30% faster**.
- Redesigned the pipeline and made the model production-ready using *Python*.

Technology Intern

AMERICAN RED CROSS

Oct 2023 - Jan 2024

- Liaised with **13 senior** and regional managers to revamp the US fundraising **database**, **addressing their concerns**.
- Developed an internal tracking system for **9,000+ units** and **\$80M in assets** for about 100 regional managers.
- Implemented **3+ new features** and **reduced save/load times by 20%** using *Python* scripts and data processing libraries, ensuring compatibility and accessibility across various devices. Introduced a **standardized data entry guide**.
- Led 2 product** creation projects, created additional visualizations, **synthesized legal documents**, and worked on mini-projects to synthesize data further, working together with **8 senior managers**.

PROJECTS PORTFOLIO - [DEBOJP.GITHUB.IO/PROJECTS](https://debojp.github.io/projects) | GITHUB - [GITHUB.COM/DEBOJP](https://github.com/debojp)

AI EMAIL ASSISTANT - DOLLY

Aug 2024 - Aug 2024

- Developed an accessible & inclusive AI-powered email auto-completion feature using **Gemini**, for personalized real-time writing suggestions.
- Set up a cross-encoder on a **Flask** server to analyze user writing style and context by ranking relevant past emails, collected by using the **Gmail API**.
- Utilized **JavaScript** to enable context-aware completions triggered by subject and body message, injected directly to the UI. ([Github](#))

SYMPTOM BASED DRUG RECOMMENDATION APP

Feb 2024 - Feb 2024

- Scraped clinical figures from over **100,000 pages** using **BeautifulSoup** to build a medicinal database and set it up on an **M0 MongoDB** cluster.
- Developed a simple ANN to recommend drugs by inferencing symptoms with **Tensorflow**, by aggregating 2 artificial Kaggle datasets.
- Designed a **Next** web application with **JavaScript** to represent the clinical figures from **MongoDB** in cards and query the ANN model. ([Github](#))

DATABASE APP FOR SCHEDULING

May 2023 - Jun 2023

- Designed & implemented a database system with **SQL** on **Microsoft Azure** to manage vaccine appointment scheduling for patients & caregivers.
- Integrated backend architecture to handle user interaction, and security measures to ensure data integrity across all transactions. *Java, JDBC.* ([Github](#))

LEADERSHIP

Design Engineer

HUSKY ROBOTICS

Sep 2022 - Mar 2023

- In a **group of 2**, led the design, proposal, and implementation of a suspension mechanism tailored to the competition requirements for our rover.
- Collaborated with a larger **team of 8(mobility subgroup)** using CAD software - **SolidWorks**, and **Python** for designing and stress testing.
- Awards:** *Canadian Intl. Rover Challenge(CIRC) Winners 2023, against 16 international universities(invitational by CIRC).*

Co-Founder & Officer

SANITAS INTERNATIONAL

Jun 2020 - Aug 2022

- Spearheaded a relief program, delivering aid to **400+** vulnerable families in our local community, and extended awareness to **2M+** individuals.
- Orchestrated targeted wellness workshops, disseminated hygiene kits and month-long food supplies across regions in Bangladesh and India.
- Garnered nationwide acclaim from leading publications:** *The Daily Star and The Global Times.*

SKILLS

- Languages:** Java, Python, JavaScript, Bash, R, SQL, C, Assembly.
- Frameworks & Tools:** React, React Native, Flask, BeautifulSoup, Selenium, Matplotlib, Scikit-learn, PyArrow, PyTorch, Tensorflow, Git, Docker, HDFS, Spark, Cassandra, Kafka, Blender, SolidWorks, MongoDB, MySQL, Firebase, Microsoft Azure, Google Cloud Platform, AWS Services(EC2, S3), Oracle Cloud Infrastructure, MacOS, Windows, Linux, Android Studio, REST APIs.