

# 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 Engineer 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, JSX, Html/Css, Bash, R, SQL/CQL, C, Assembly.
- Frameworks & Tools:** PyTorch, Tensorflow, Scikit-learn, PyArrow, Pandas, Matplotlib, BeautifulSoup, Selenium, React, React Native, Figma, Flask, Express, Git, Jira, Docker, HDFS, Spark, Cassandra, Kafka, Blender, SolidWorks, MongoDB, MySQL, Firebase, OpenAI, Microsoft Azure, Office, Google Cloud Platform, AWS Services(EC2, S3), Oracle Cloud Infrastructure, MacOS, Windows, Linux, Android Studio, REST APIs.