



# Arnab Singh

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## SUMMARY

M.S. Computer Science student with experience in **software development, automation, and data analytics**. Skilled in **Java, Python, SQL, and Power BI**, with hands-on experience in **cloud computing, scalable systems, and data-driven solutions**. Passionate about **optimizing workflows, automation, and leveraging AI/ML for decision-making**.

## EDUCATION

### University Of Dayton

M.S. in Computer Science

**Netaji Subhas University of Technology**

B.Tech. in Computer Engineering

January 2025 – Present

**Expected Graduation: December 2026**

2020-2024

**CGPA: 7.24**

## EXPERIENCE

### SWE Intern — Defence Research and Development Organization (DRDO) May 2023 – July 2023

- Worked on a drone-based facial recognition system, employing AI, IoT, and machine learning to enhance security surveillance.
- Designed and implemented real-time image processing algorithms and integrated GPS tracking for precise subject identification.
- Utilized Python for algorithm development and TensorFlow for machine learning model training, improving facial recognition accuracy under varying conditions.
- Contributed significantly to a pioneering project that leveraged cutting-edge technology to improve security measures. Tech stack used: **Python, TensorFlow, IoT technologies**.

### Data Analyst Intern — Army Base Workshop

December 2023 – February 2024

- Developed and maintained an interactive **Power BI** dashboard to monitor COVID-19 supply distribution to military hospitals, streamlining logistics and enhancing operational efficiency.
- Enhanced data integration and accuracy through advanced **Python** scripting and **API** management, driving strategic decision-making. Tech stack used: **Power BI, Python, SQL, API technologies**.

## PROJECTS

### BloodBank+: Blood Donation Management System

March 2025

- Developed a **JavaFX-based application** for managing **blood donors and recipients**.
- Implemented **real-time blood stock tracking** and **donor search** by blood group and location.
- Used **MySQL** for secure data storage and **JDBC** for database connectivity.
- Technologies used: **Java, JavaFX, MySQL, JDBC**.

### Delay-Tolerant Task Offloading in Fog-Enabled IoT Networks

December 2023

- Utilized **Reinforcement Learning** in fog computing domain for efficient task offloading.
- The proposed novel algorithm achieved a **7%** improvement over other baseline schemes in terms of latency.
- Technologies used: **Python, Google Colab**.

### Sales and Revenue Analytics Dashboard

April 2023

- Designed a **Power BI dashboard** to track revenue, customer acquisition trends, and product performance.
- Integrated **real-time sales data** from **MySQL** using Python for data ingestion and preprocessing.
- Implemented **forecasting models** using Python (Prophet) for predictive sales analysis.
- Technologies used: **Power BI, SQL, Python (Prophet), MySQL**

## ACHIEVEMENTS

- Secured an approximate **Percentile of 98.2** in **JEE Main 2020**.

## SKILLS

**Languages:** Java, Python, SQL

**Concepts:** Object-Oriented Programming (OOPs), Java GUI Development

**Frameworks/Libraries:** React.js, Express.js, Pandas, NumPy, TensorFlow, Matplotlib

**Other:** MySQL, Git, Microsoft Azure, Power BI