# Tejaswini BK

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## EDUCATION

- **University of Rochester** — Rochester, NY
  *MS in Computer Science* — *Graduation Date: Dec 2026*
- **Amrita School Engineering, AVV** — Coimbatore, India
  *B.Tech in Computer Science* — *Graduation Date: Jun 2024*

  GPA: 7.96/10.0

## TECHNICAL SKILLS

**Machine Learning & Data Science:** PyTorch, TensorFlow, Sklearn, Pandas, Numpy, Deep Learning, Neural Networks

**Languages:** Python, C, C++, Java, HTML, CSS, JavaScript, Golang (basics)

**Databases:** PostgreSQL, MongoDB, CockroachDB (basics)

**Tools & Platforms:** Git, Jupyter, Colab, Node, React, REST API, Power BI, Blue Prism, Power Automate

## WORK EXPERIENCE

- **BNP Paribas ISPL** — Chennai, India
  *Associate Software Engineer* — *Jul 2024 - Aug 2025*
  - Developed and maintained robotic process automations using **Blue Prism and Power Automate**, reducing manual effort by **70%** for business teams.
  - Led **platform upgrade and migration** of ∼200 bots, executing comprehensive regression testing that reduced potential downtime from weeks to hours, ensuring **100% business continuity**.
  - Tested, troubleshot, and deployed fixes for robotic processes, increasing bot reliability and reducing execution errors.
- *Software Engineering Intern* — *Jan 2024 - Jul 2024*
  - Developed automation web applications using **.NET frameworks** and **C#**; designed interactive dashboards in **Excel and Power BI** for data-driven decision-making.
  - Built and deployed a **Python-based chatbot** to automate IT ticket creation, reducing manual effort and speeding up request submission.
- **L&T PMSC** — Coimbatore, India
  *Intern* — *Jul 2023 - Aug 2023*
  - Built a production monitoring web application using the **PERN stack** to track shop floor processes and estimate completion times, providing real-time visibility into production efficiency.
  - Developed interactive **Power BI dashboards** to visualize key performance metrics, enabling data-driven decision-making.

## PROJECT EXPERIENCE

- **MinAPE Implementation for Multimodal Industrial Wear Detection** — *University of Rochester*
  - Implemented **MinAPE (Multimodal Isotropic Neural Architecture with Patch Embedding)** from scratch in **PyTorch** to process multimodal datasets (scalograms, spectrograms, images) for industrial wear detection.
  - Designed patch embedding layers, attention mechanisms, and fusion strategies; conducted ablation studies using Git and conda for reproducible evaluation.
- **Factory Energy Consumption Prediction** — *Amrita School of Engineering*
  - Built regression and classification models using **Linear Regression, Ridge, Lasso, Random Forest, SVM, and KNN** to predict energy consumption patterns in steel manufacturing based on temporal and operational features.
  - Performed **feature engineering and EDA** on 35,000+ time-series records; achieved optimal performance with Ridge regression and Random Forest classification.
- **Heuristic Based Approach for Malware Detection** — *Amrita School of Engineering*
  - Built a **Python-based system** using custom grammars and **Grammatical Evolution (GE)** to model malware behavior; applied ML classifiers for detection.
  - Achieved higher adaptability and accuracy against evolving threats by removing dependence on predefined rules.