

# RANOJOY DEB

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## PROFESSIONAL EXPERIENCE

### Kiss Applications

Reading, Pennsylvania

#### Full Stack Developer (Part-time contract)

Nov 2024 - Present

- **Developed & Maintained Full Stack Features:** Migrated 12+ backend REST API services to Firebase and Express.js, improving application scalability and reducing server costs by 15%.
- **Enhanced Front-End Interfaces:** Built three new UI components in Vue.js for a prototyping tool, increasing user satisfaction by 25% through iterative design and market feedback loops..

### School Frontiers

Philadelphia, Pennsylvania

#### Chief Data Architect

Aug 2024 - Feb 2025

- **Database & API Development:** Created a custom PostgreSQL database and Flask-based API to centralize data from six charter schools, enabling real-time data access for internal dashboards.
- **Front-End Integration:** Introduced automated Power BI dashboards and integrated them with the company's WordPress site for broader stakeholder engagement, increasing visitor dwell time by 20%.
- **ETL Orchestration:** Deployed Apache Airflow to automate data ingestion and transformation, reducing manual data-processing tasks by 30+ hours per month.

### Essentials Utilities

Bryn Mawr, Pennsylvania

#### Data Analyst Intern

May 2023 – Aug 2023

- **Time-Series & Anomaly Detection:** Built LSTM and PCA pipelines to identify operational anomalies, reducing additive consumption by 10% across 12+ wastewater treatment plants.

### Mu-Sigma

Bangalore, India

#### Decision Science Team Lead

Jun 2018 – Jul 2022

- **Enterprise Full Stack Solutions:** Built a MEAN-stack application for project throughput tracking, integrating Active Directory and email-based RPA workflows, used daily by 1,000+ employees.
- **Angular & Django Development:** Developed a CRUD application for a US automotive firm, enabling user-friendly complex SQL query generation, saving 50+ hours per week in database admin tasks.
- **NLP Chatbot Implementation:** Led a team to deploy a RASA-based AI chatbot, reducing response times by 50% and generating \$650K in revenue for a petrochemical client.

## PROJECTS

### AI Agent Web Crawler | React, Puppeteer, Jest, OpenAI API

Built a browser extension that autonomously tests accessibility compliance and generates automated Jest test cases—leveraged LLMs to interpret UI elements and expedite functional testing.

### Stock Market ETL Pipeline | Apache Airflow, dbt, PostgreSQL, Docker

Implemented an automated pipeline to extract, transform, and load financial data from Alpha Vantage API. Deployed containerized workflows, reducing latency and improving data retrieval efficiency.

### Pennsylvania Schools Data Visualization | Dash, Flask, PostgreSQL, Plotly

Created an interactive dashboard to track and compare performance metrics across 2,500+ charter and public schools. Enabled stakeholders to visualize trends and identify key factors affecting outcomes.

## CORE SKILLS

- **Front-End:** React, Vue.js, Angular
- **Back-End:** Node.js/Express, Django, Flask, FastAPI
- **Databases & DevOps:** PostgreSQL, MySQL, MongoDB, Neo4j, Docker, Apache Airflow, Kafka, Spark
- **Languages:** JavaScript, Python, SQL, R, Go, Bash
- **Data & ML:** Multi-Linear Regression, Gradient Boosting(XGBoost, LightGBM), LSTM, ViT, YOLO, SARIMA, DQN, PPO,
- **Tools:** Power BI, Tableau, Git, Power Automate, Puppeteer, Jest, Azure, AWS

## EDUCATION

### The Pennsylvania State University

Malvern, Pennsylvania

#### Master of Science in Data Analytics

Aug 2024

**Thesis:** Predictive Modeling of Water Quality Indexes Using Ensemble ML on Incomplete Datasets

## CERTIFICATES

PMO Fundamentals (2024) | Azure Fundamentals (2025) | Project Management Professional (ongoing)