

# Aditya Tipre

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## EDUCATION

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### Purdue University

West Lafayette, IN

*B.S in Applied Mathematics, Minor in Computer Science*

### Relevant Coursework

*Object Oriented Programming (Java), Multi-variable Calculus, Linear Algebra, Real Analysis, Discrete Mathematics, Mechanics*

### Clubs

*Purdue Space Program: Liquids Team Member, Purdue Math Club, Boiler Blockchain*

## EXPERIENCE

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### - Data Engineer Intern

June 2024 – Present

*Optimal Strategix Group - OSG*

*Remote*

- Developing a comprehensive web scraping pipeline using BeautifulSoup and Selenium to extract reviews and discussions from medical forums, Reddit, review sites, and news articles.
- Designing and implementing a robust data pipeline in MongoDB for collecting, cleaning, and storing scraped data.
- Utilizing LLMs and open-source models for Named Entity Recognition (NER) to identify domain-specific entities, and conducting sentiment analysis at both sentence and aspect levels using Hugging Face.
- Creating dynamic PowerBI dashboards to transform raw data into actionable business intelligence insights.

### - PSP Liquids: Back End Developer

August 2023 – Present

*Purdue Space Program: A SEDS Chapter*

*West Lafayette, IN*

- Developed a React component, PSPieChartPlugin, to integrate real-time data updates with a WebSocket server.
- Established a WebSocket connection to receive data, parsed JSON messages, and triggered listeners based on unique identifiers.
- Demonstrated proficiency in handling real-time data, managing configurations, and ensuring effective communication between different parts of the rocket their respective applications

## PROJECTS

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### Marketplace | *Java, Git*

November 2023 – December

- \* Utilized object oriented concepts and concurrency to build a marketplace application for merchants and buyers. Facilitated the creation of white labelled stores and customer support communications.
- \* Used File reading techniques to utilize CSV files to be utilized by sellers to both import and export products
- \* Programmatically parsed CSV files to enable the batch upload of products for merchants.
- \* Enabled CRUD operations for merchants on their respective products.
- \* Created user workflows for merchants and delegated tasks amongst the project team.

### Independent Research | *Multi-variable Calculus, Latex*

March 2023 – June 2023

- \* Undertook a rigorous independent research project exploring the mathematical foundations of the polar planimeter
- \* Applied Green's Theorem from multi-variable calculus to scrutinize and validate the logic behind the polar planimeter, tying theoretical mathematics, culminating in building an actual planimeter to verify results.
- \* Successfully translated complex mathematical concepts into a coherent research paper, providing a detailed and insightful analysis of the project's findings.

## TECHNICAL SKILLS

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**Languages:** Java, Python, C/C++, TypeScript/JavaScript, Latex

**Frameworks:** React, Node.js, MySQL, MacOS, Linux

**Developer Tools:** Git, Docker, Google Collaboratory, VS Code, Visual Studio, IntelliJ, Eclipse

**Libraries:** NumPy, Matplotlib, pyTorch, OpenCV, TensorFlow, Gradio