

# Sarthak Patipati

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## EDUCATION

### University of Illinois at Chicago

*Bachelor of Science in Computer Science*

Chicago, IL

*Dec. 2023*

## TECHNICAL SKILLS

**Languages:** Java, JavaScript, Python, TypeScript, Angular, Spring, Spring Boot, HTML5, CSS3, JDBC, Jackson, JPA, jQuery, Node, webpack, Babel, Maven, npm, React, Redux

**Software:** VSCode, Git, GitHub, cmdr, pgAdmin, Postman

**Databases:** PostgreSQL

**Operating Systems:** MacOS, Windows

## EXPERIENCE

### FastTrack Developer

Feb. 2024 – Present

*Cook Systems*

*Memphis, TN*

- Enhanced RESTful backends and data operations in Java using Spring, Spring Boot, JPA, and PostgreSQL
- Streamlined database and API testing with PGAdmin and Postman for improved user request and data handling
- Mastered JDBC, JPA, and Hibernate for ORM, MVC design patterns, and dependency injection with Spring's IoC

### Research Assistant

June 2022 – Dec. 2023

*Complex and Sustainable Urban Networks Laboratory*

*Chicago, IL*

- Yielded valuable insights by leading an energy consumption project studying energy use in residential areas
- Enhanced energy consumption planning by analyzing urban energy predictors with machine learning techniques
- Improved sentiment analysis accuracy for social media events, by accurately labeling training datasets

### Engineering Intern

June 2022 – Aug. 2022

*Illinois Department of Transportation*

*Springfield, IL*

- Enabled operational efficiency across company yards through inspections, leading to optimal resource utilization
- Resolved traffic issues at four intersections by implementing solutions that improved traffic flow and safety
- Developed engineering plans and interpreted blueprints with a team of diverse engineers for public-sector projects

## PROJECTS

### Twitter API | *Java, Spring Boot, JPA, PostgreSQL, pgAdmin, Postman, Git, Maven*

Feb. 2024

- Developed a RESTful API for social media content, implementing CRUD operations on tweet-like content
- Ensured efficient data management by developing a rational database schema using PostgreSQL and pgAdmin
- Managed HTTP requests efficiently with Spring Boot and JPA enhancing API robustness with Postman testing

### Endangered Species Analysis | *Python, pandas, scikit-learn, matplotlib, seaborn, folium*

Dec. 2023

- Aggregated 150,000+ data points into a mammal species dataset using ETL from IUCN Red List and Zenodo
- Developed a data model for mammal endangerment analysis with 40+ ecological attributes using Python and SQL
- Enhanced research capabilities in mammal conservation studies through data integration and advanced analytics

### Energy Consumption | *Python, pandas, geopandas, RandomForestRegressor, XGBoost*

Aug. 2023

- Uncovered key consumption patterns, trends, and correlations in 30,000+ Chicago residential energy accounts
- Highlighted 40+ key features influencing residential energy use by employing machine learning techniques
- Drove sustainable urban development with predictive models linking energy consumption to over 50 land-use types

### Fitness and Nutrition Buddy | *Java, SQL, Git, Maven*

Jan. 2023

- Delivered a robust nutrition app, featuring goal setting, meal planning, restaurant search, and intake tracking
- Executed comprehensive testing for functionalities, ensuring seamless user experience and interface accuracy
- Strategized solutions for real-time updates, proposing features for restaurant self-editing, and future enhancements

## PUBLICATIONS

[1] Acosta-Sequeda, J., Mohammadi, M., Patipati, S., Mohammadian, A., Derrible, S. (2024). Estimating Telecommuting Rates in the US Using Twitter Sentiment Analysis. <https://doi.org/10.21203/rs.3.rs-3879832/v1>