

Mohammad Bayat

Objective

As a graduate student at the New Jersey Institute of Technology pursuing a master's in computer science, I specialize in data mining and database systems with a strong focus on applying machine learning to system design and optimization. I am actively seeking PhD opportunities to further my research in these areas.

Education

- **Computer Science M.S** | New Jersey of Technology | Jan 2024-May 2025 (**Expected Graduation**)
 - **Computer Science M.S** | Rochester Institute of Technology | August 2023-Dec 2023
 - **Computer Science B.A** | Queens College | August 2020- Dec 2022
- Relevant Course-works:** Machine Learning, Big Data, Database Systems, Advanced Databases, Data Mining

Skill

- **Programming Languages:** Python, JavaScript, C++
- **Frontend Frameworks:** ReactJS, AngularJS, Vue.js CSS, HTML, Bootstrap
- **Backend Frameworks:** TypeScript, Node.js, Django, ExpressJs
- **Database Skills and Technologies:** DuckDB, PostgreSQL, MySQL, SQL Server, SQL, Transactional SQL, SQLiteStudio
- **Data Analytics Technologies:** Pandas, Numpy, Scikit-learn, Seaborn, Matplotlib, Microsoft Excel
- **Version Control:** Git, GitHub
- **Cloud Technologies:** AWS, Microsoft Azure| Relevant Certification: AWS Cloud Practitioner |Issued: 2021

Experience

Full Stack Developer Intern | DIYVERSITY | Remote | 09/2022 - 10/2022 | **Technologies:** ReactJS, CSS, HTML, Firebase

- Collaborated with the frontend team on the development of a Google Chrome Extension and optimized menu bar navigation using ReactJS, CSS, and HTML.
- Implemented backend connectivity via Firebase for user authentication and managed onboarding processes for new interns.

Research Assistant | Stony Brook University| Sep 2018 - Dec 2018

- Responsible for measuring the cerebral cortex of bat species through hundreds of scans.
- Transferred the acquired data to different Excel files.
- Screenshot the measurements to confirm the accuracy of the data.

Projects

NYC Transportation Data Web Application | **Technologies:** Python, DuckDB, SQL, JSON

- Designed and established a robust DuckDB Schema for efficient storage and management of a 64 GB dataset from the NYC Taxi Commission.
- Enhanced the data scraping script, enabling users to select specific data segments for download, improving data retrieval efficiency.
- Utilized the DuckDB API to develop advanced SQL queries, enabling in-query data analysis within Python files.
- Employed the Pickle module to save and share data analysis results for seamless collaboration with team members working on the web application's front end.

Research Reports:

- **An Analytical Study and Visualization of Road-Based Shared Transportation Dynamics:**
 - **Author/s:** Mohammad Bayat, Adrian Edwards, Ben Giacalone
 - **Date:** December 2023
 - **Description:** Performed data mining on NYC's Taxi and Limousine Commission datasets to extract insights and analyze traffic trends.
- **Data Discovery: Synthesizing Insights for Big Data Analytics**
 - **Author/s:** Mohammad Bayat
 - **Date:** December 2023
 - **Description:** Explored advanced data discovery techniques in Big Data analytics, synthesizing insights from three pivotal studies at the 2023 Very Large Databases conference.