Ibrahim Miloua

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Education

University Of Pittsburgh Pittsburgh, PA

Bachelor of Science in Computer Science, Minor in Math *Aug. 2022 – May 2026*

- Relevant Coursework: Software Engineering, Algorithms 1 and 2, Discrete Math, Linear Algebra, Statistics, Software Assurance, System Design

Experience

Undergraduate Research Assistant May 2024 – Present

University Of Pittsburgh *Pittsburgh, PA*

- Developed a full-stack web application using React, PostgreSQL, and Docker to analyze web-scraped data from Twitter and Facebook
- Collaborated with Ph.D. students to map out projects based on social networks, social media analysis, cyber-social influence, and the development of ethical AI systems
- Explored ways to visualize JSON data using D3 and modern UI with MUI
- Contributed 2k+ lines of code to an established codebase via Git

Information Technology Support Specialist May 2024 – Present

University Of Pittsburgh *Pittsburgh, PA*

- Communicated with managers to set up campus computers
- Assessed, troubleshooted, and responded to computer problems or general issues brought by students, guests, faculty, and staff
- Maintained the upkeep of computers, classroom equipment, and 200 printers across campus

Projects

Gym Busyness | *React, MongoDB, Node, Tailwind, Git* Jan 2024

- Developed a full-stack web application using Node and MongoDB for the backend, and React for the frontend, to show local universities' current gym busyness status
- Implemented a database to fetch user data
- Collected real-time data to visualize live gym scores
- Implemented a friend's list system allowing the viewing of friend statuses

Sidewalk Walkability | *Jupyter Notebook, Python, Matplotlib, Pandas, Git* Aug 2022

- Developed a project to determine the safest neighborhood using data on sidewalk walkability, crime reports, and primary care facility locations.
- Utilized datasets on sidewalk-to-street walkability, crime reports, and primary care facilities from WPRDC and census ZIP code data.
- Analyzed crime rates per neighborhood to identify the safest areas based on crime frequency and population.
- Investigated the walkability of neighborhoods by calculating the ratio of sidewalk length to street length.
- Examined the accessibility of primary care facilities by evaluating the population-to-facility ratio across different neighborhoods.
- Combined individual analyses into a unified notebook to derive a final conclusion on the best neighborhood to raise a family in, based on safety metrics.
- Implemented data cleaning and preprocessing techniques to ensure accuracy and reliability of the datasets.
- Visualized data using Matplotlib to create intuitive graphs and charts representing neighborhood safety, walkability, and healthcare accessibility.
- Collaborated using Git for version control, ensuring smooth teamwork and project progression.

Technical Skills

Languages: Java, Python, C/C, SQL (Postgres), JavaScript, HTML/CSS, R
Frameworks: React, Node.js, Flask, JUnit, Material-UI, Bootstrap
Developer Tools: Git, Linux, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib