

# Isa Muradli

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## EDUCATION

### Illinois Institute of Technology

*Doctor of Philosophy in Computer Science*

Chicago, IL

*Aug 2024- Present*

### Illinois Institute of Technology

*Master of Science in Computer Science*

Chicago, IL

*2021- 2023*

## EXPERIENCE

### Associate Data Scientist

*Pepco Holdings - Exelon*

July 2023 - July 2024

*Washington DC, US*

- Led the migration of a 46GB database tables to Azure Cloud, redesigned the schema and relationships, **reducing overall storage to 236MB**.
- Developed 7+ **data pipelines and dataflows** for a financial Datamart, delivering a fully automated system across 4 business units.
- Conducted unit testing, a quality assessment of systems, and achieved **30% better performance** of operations.
- Participated in full lifecycle implementations, securing API calls, and maintaining **5 different analytical** dashboards.

### Data Engineer & Science Intern

*Pepco Holdings - Exelon*

November 2022 – May 2023

*Remote, US*

- Performed **data cleaning** for evaluating models by assessing 1100+ data points within the organization.
- Created **dashboard** to display performance efficiency against metrics, enhancing executive **visibility** by 40% .
- Collaborated with quantitative engineers to advance SQL procedures, improving the **performance** by 30%.

### Software Engineer Intern

*Azerconnect LLC*

January 2021 - July 2021

*Baku, Azerbaijan*

- Optimized API for system to attain **reusability** and a 15 % reduction of the response time in production.
- Offered up to 3 **DDL solutions** to manage tasks with resources, achieving a 10 % increase in **data consistency**.
- Optimized** 20+ SQL queries to improve **functionality** and raised **scalability** by 25%.
- Created 50+ scripts to perform **integration** in the Oracle Cloud platform for business units and users.

## PROJECTS

### Decentralized P2P System with DHT | *Python, Bash, Linux, Git*

Oct 2024

- Designed a **asynchronous** decentralized publish-subscribe system using a **hypercube topology**, ensuring non-overlapping data distribution across nodes.
- Created a robust hash function for data location computation, enabling topic management and retrieval across all nodes **without central coordination**.
- Each node supports system APIs, handling **concurrent** publish/subscribe requests while handling incoming calls from other nodes.
- Achieved 50ms average API **latency** and 500 messages per second **throughput** using random workloads.

### Process & Memory Management | *C/C++, Git, Unix OS, gdb*

Apr 2023

- Improved OS scheduler of round-robin to priority-based, reducing turnaround and **response** time by 8-10 seconds.
- Delivered a module to avoid the starvation of the processes and improved **utilization** of CPU by 5%.
- Scripted a data transferring module, maintaining up to a 15% drop in **workload** and improving **locality**.

## TECHNICAL SKILLS

**Languages:** Python, JavaScript (ES6), C/C++, Java, SQL

**Web Technologies:** Flask, Node.js, Express.js, React/Redux, Bootstrap, HTML5, CSS3

**Database Skills:** MySQL, Oracle SQL, PostgreSQL, MongoDB

**Other Technologies:** Azure Data Factory, Power Automate, Git, AWS Hadoop, Spark, Linux, JIRA, Agile, Power BI, Excel