

# Homayoun “Homa” Banazadeh

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[Portfolio](#) | [GitHub](#) | [LinkedIn](#)

## Profile

- Dedicated data professional and **Microsoft Azure Data Engineer certified**, specializing in cloud environments. Proven track record of delivering impactful data products, Proficient in data engineering, systems administration, and adept at deploying, maintaining, and troubleshooting information systems for valuable insights through technical reporting.

## Experience

### Software Analyst | Western Stevedoring

Sept 2021 - Apr 2022

- Conducted software research and gathered stakeholder requirements over interviews, which led to producing a report that directed the company's decision to invest \$10,000 annually.
- Built data models and utilized Power BI query editor in addition to DAX to create KPI reporting dashboards used by teams of over 20 people to view live reports of KPIs. Link to dashboards found here: [GitHub](#)
- Developed a Python-based automated data pipeline tailored to handle monthly financial Excel files, which were often irregularly formatted and required thorough scripting due to loose filling guidelines.
- Led staff training sessions and authored documentation covering maintenance, risks, and challenges.
- implemented an automated approval system for vehicle permits using Power Automate. Leveraging Microsoft Forms, designed a process for truckers to submit information and certificates.

### Data Engineer | ICBC

Sept 2020 - May 2021

- Migrated legacy warehouse pipelines in IBM Data Stage to a modern Hadoop implementation using Spark and Scala for a 60% improvement in the speed of data memory access.
- Authored 10 data mapping documents pivotal for the seamless data migration from legacy systems to Hadoop, enabling the engineering team to grasp complex data transformations without delving into code analysis.
- Processed extensive SQL logic containing hundreds of lines to develop new transformations in Spark and translated the SQL scripts into various dialects.

### Application Developer | Snapp (the undisputed Uber of food delivery in Iran)

Jan 2017 – Jan 2019

- Developed and implemented a database using MS SQL Server, while actively contributing to the creation of SCM software utilizing the Microsoft .Net framework 3.5, employing both C# and VB.Net languages.
- Leveraged LinqToSQL as a data access solution implementing it using the ASP.NET MVC framework.
- Employed Microsoft Team Foundation Server for effective source control and streamlined project management.

## Education

### Simon Fraser University

Sept 2019 – Dec 2023

### BSc. – Major in Data Science | Certification in Computing Studies (School of Applied Sciences)

- Dean's Honour List, SFU Transfer Scholarship, Peer Education Volunteering Group Manager.

### Certification: Microsoft Azure Data Engineering | Credential found here: [link](#)

Oct 2023 – Dec 2023

## Technical Skills

- **Tools:** Power Automate, Azure, Databricks, Docker, Git, Hadoop, Jupyter Notebooks, Power-BI, Spark, Tableau.
- **Languages:** Python, R, Java, Scala, SQL (PostgreSQL, SQL Server), C++, C#.

## Hackathons

### High Spirited Dashboard | SAP Invitational Hackathon | [GitHub](#)

October 2022

- Led development of a dynamic web platform at SAP, fostering engagement in hybrid work models. Achieved a top-ranking position among 35 teams, presenting the project to judges and peers.
- Contributed to key components, the Flask-powered login page, server requests, and session management.
- Implemented a serverless database with SQLite, connecting and visualizing data through HTML fields.

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## Projects

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**Package Manager** | Demo found here: [Vimeo](#) Aug 2022 – Oct 2022

- An inventory management application to add, save, load, and remove various package types. UI was made using Java Swing with sections for adding/removing packages and viewing expired/overdue packages.
- Employs Factory design pattern for handling packages efficiently to ensure that packages are created and managed consistently while preventing unnecessary resource duplication. Explored other design patterns like Adapter, discovering their elegant solutions for adapting and integrating within the project.
- Data is saved on server side as a JSON list. Server side was made with Spring Boot framework. Client code sends and receives data using HTTPS requests with CURL commands and API calls.

**Pokémon Database** | Link to GitHub found here: [GitHub](#) Aug 2020 – Sept 2020

- Developed a Pokémon database in SQLite with symbols representing participation and cardinality, ensuring an understanding of relationships among entities like Pokémon, moves, game locations, gyms, and trainers. Includes an ER diagram, normalized tables, triggers, and set indexes.
- Implemented the database in 3rd normal form for optimized efficiency, data storage, and a clear structure.

**Analysis of CO2 and yearly Canadian Temperatures Shiny App** | [Website](#) November 2018

- Developed a Shiny app that visualizes and examines the relationships between Canadian temperature, CO2, and Wind Speed data over last 2 decades.
- Includes a time-series analysis of temperature data, and regression analysis between CO2 and temperature with the capability to visualize multiple aspects of these relationships.

## Certification Key Competencies

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### Data Storage:

- File Formats: Parquet, JSON, CSV, AVRO.
- Access Tiers: Cool, Hot, Archive.
- Disaster Recovery Scenarios: Local vs. Geo-redundant (trade-offs), Services: Blob Storage Gen2, Data Lake Gen2.
- Hierarchical Structures, Benefits, Wildcards for Reading Folder Time-based Structures.

### Data Processing:

- Azure SQL Database, Cosmos DB, Effective Partitioning Strategies.
- Optimizing SQL Pools (Spark, Serverless, Dedicated), External Tables.
- Diverse Loading Strategies (Bulk, PolyBase, Copy Command).
- Star Schema Design (Dimensions vs. Fact Tables).
- Azure Synapse Pipelines, Distribution Methods, Surrogate Keys.
- Indexes, Partition Switching, Windowing Functions.
- Azure Databricks, Creating Clusters (Job vs. General, Cluster Pool).
- Date Functions, Saving as Delta Tables, Streaming Data, Monitoring Performance, Versioning of Tables.
- Data Factory Pipelines, Mapping Data Flow, Cache Sink.
- Self-hosted Integration Runtime, Schema Drift, Stored Procedures.
- Activities: Lookup, For Each, Get Metadata.

### Data Security:

- Authentication: Account Keys, Shared Access Signatures, Active Directory.
- Access Control: Key Vault, Virtual Network Service Endpoint.
- Data Encryption, Column vs. Row Level Security, Data Discovery, and Classification.

### Monitoring and Optimization:

- MS Purview, Lifecycle Policies, Alert Rules, System Views.
- Transactions in DW, Stream Analytics: Streaming Units, Job Diagram.