# Marko Al-Hamadani

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## Education

**Oregon State University** — Oregon, US
*Bachelor of Computer Science* — *Sept. 2024 – Dec 2028*

**University of Toronto** — Toronto, ON
*Master of Engineering in Biomedical Engineering* — *Sept. 2019 – Dec 2020*

## Work Experience

**IT/DS Analyst** — April 2024 – Present
*Center for Mental Health and Addiction* — *Toronto, ON*

- Built a series of Tableau dashboards modeling survey data spanning 1000+ healthcare organizations across Ontario, allowing program level survey analytics for healthcare providers
- Architected reusable SQL views, incorporating 10+ tables each, allowing for ease of data importing into Data Visualization Platforms

**Research Impact Analyst** — Oct. 2021 – April 2024
*University Health Network* — *Toronto, ON*

- Developed Excel Macros using VBA to automate monthly data pulls, reducing report generation time by 85%
- Authored company-wide dashboards in PowerBI, combining cross-departmental data sources, reducing time spent generating figures and tables manually in excel by 90%
- Designed validation workflows to detect missing, duplicate, and ineligible records, improving data integrity across 400+ UHN researcher profiles used in grant submissions

## Volunteer Experience

**Software Engineering Intern** — April 2025 - Aug 2025
*BeaverHacks Next - Oregon State University Hackathon Club* — *Oregon, US*

- Developed a web enabled tool designed to support hackathon teams that want to continue developing their projects beyond the event
- Designed and developed logical database schema for team and project related data using Prisma
- Leveraged Next.js to construct a frontend UI, integrating a PostgreSQL database with a client-side sponsor dashboard and project sign-up page

## Projects

**URLsnip** | *Vite, Python, FastAPI, Supabase*

- Developed a full-stack URL shortener with a Vite frontend and Python API, implementing caching to optimize short-link generation performance
- Implemented unique string generation with Base64URL encoding to generate 5-character short URLs
- Developed RESTful endpoints in Python to handle client side requests

**StockTracker — Congressional Financial Disclosure Tracker** | *Python, Supabase*

- Engineered a PDF extraction system to parse unstructured documents and load structured transaction records into a PostgreSQL database across three tables (Members, Filings, Filing_Data)
- Designed an XML index parser to extract document identifiers, web scrape Financial Disclosure Reports, download relevant PDF's, and upsert member and filing records
- Developed a CLI query tool with filtering capabilities (by member name and date) using rich for formatted terminal output

**QuikTalk** | *React, Node, MongoDB, Express, Socket.io*

- Designed and developed a social media platform for users to send and receive messages in real time using Socket.io

## Technical Skills

**Languages**: Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R
**Frameworks**: React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI
**Developer Tools**: Git, Docker, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
**Libraries**: pandas, NumPy, Matplotlib