

Ahmad Pourihosseini

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EXPERIENCE

Backend Software Engineer

Sep 2024 – Present

Instacart - Toronto, ON, Canada

- Owned migration of Sponsored Product APIs from Ruby to a Go microservice and the team's Active Record dependencies to an in-house Go query builder, using shadow testing and launching with zero incidents, unblocking infrastructure switchover.
- Built an Agentic AI Slack bot for on-call incident triage using ADK, with RAG to search over the codebase context, and an MCP server for the company's feature variants service, to improve incident response time and developer productivity.
- Investigated and resolved a major revenue-impacting issue in data pipelines, in a cross-team collaboration, through extensive SQL analysis in Snowflake and visualizations in Mode dashboards, with comprehensive data-health checks to prevent regressions.
- Launched specialized promotional campaigns tailored to a specific partner's needs with custom backend logic, collaborating across Sales, Product, and Data Science, resulting in the partner doubling their ads and promotions budget investment with Instacart.

Backend Software Engineer

Mar 2023 – Sep 2024

BlueCat - Toronto, ON, Canada

- Developed and enhanced backend features in the core DDI (DNS, DHCP, IP Management) product, using Java & C++.
- Contributed to company-wide security initiative to upgrade all libraries, leading the PowerMock to Mockito 5 transition, managing tickets to distribute work across the team and onboarding new members, and contributing to the Hibernate 5 to 6 migration.
- Pitched and built a test flakiness dashboard embedded in Jenkins reports, enabling engineers to quickly identify unreliable tests and reduce time spent investigating false-positive failures, receiving company-wide positive feedback.

Machine Learning & NLP Research Intern

May 2022 – Mar 2023

Samsung AI Centre - Toronto, ON, Canada

- Researched optimizations on advanced NLP algorithms, improving the state-of-the-art dependency parser in the cooking domain by 7.8 F1 scores in edge prediction, using PyTorch, HuggingFace, and AllenNLP. ([repository](#))
- Utilized data visualization tools to find common error patterns in model predictions and conducted extensive experiments involving fine-tuning transformer-based large language models (LLMs), including BERT and BART.
- Co-authored "[End-to-end Parsing of Procedural Text into Flow Graphs](#)", Proceedings of LREC-COLING 2024.

Machine Learning Research Assistant

Feb 2019 – Feb 2020

Machine Learning and Computational Modeling Lab at the University of Tehran - Tehran, Iran

- Researched and implemented a novel adversarial example generation technique using PyTorch and fast.ai, improving output diversity of the state-of-the-art generator and demonstrating transferability across ImageNet, ResNet, and VGGNet architectures.

EDUCATION

MSc in Applied Computing [GPA 4.0]

Sep 2021 – Jun 2023

University of Toronto, Department of Computer Science - Toronto, ON, Canada

- Specialized in natural language processing, with two courses on the subject and two in machine learning foundations.

BSc in Software Engineering [GPA 3.97]

Sep 2015 – Feb 2020

University of Tehran, Department of Software Engineering - Tehran, Iran

PERSONAL PROJECTS

Tab Renamer Chrome Extension - Personal Project

Winter 2024 - Present

A Chrome extension to rename and customize the favicon of your tabs for better organization and productivity, with 10,000+ users and a 4.8 star rating (from 42 reviews). Built with Typescript, React, Jest and Playwright, and GitHub Actions for testing and CI. ([chrome web store listing](#), [repository](#))

TECHNICAL SKILLS

- Programming Languages: Python, TypeScript, JavaScript, Ruby, Go, Java, C/C++
- AI/ML: Google ADK (Agent Development Kit), Braintrust (LLM Evals), Pydantic, PyTorch, NumPy, Pandas, Scikit-learn
- Libraries & Frameworks: Terraform, Docker, Datadog, Postgres, Redis, gRPC, Protobuf, GraphQL, REST APIs, Snowflake, Ruby on Rails, React, Jest, Playwright, Webpack

AWARDS

- Vector Scholarship in Artificial Intelligence, Vector Institute, \$17,500

May 2021

- Ranked Top 0.3% in the Nationwide University Entrance Exam among 167,000 participants

Jul 2015