

HARSH G. SHAH

SOFTWARE ENGINEER E.I.T.

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ABOUT

Software Engineer E.I.T. with 4+ years of experience building full-stack applications, cloud solutions, data platforms, and AI-powered tools. Proven track record of solving complex engineering problems and delivering scalable, reliable software with measurable business impact.

SKILLS

- **Frontend:** TypeScript, JavaScript, React.js, Next.js, HTML, CSS
- **Backend & APIs:** Python, Node.js, Django, Flask, C#, Java, REST APIs, Microsoft Graph API
- **Cloud & DevOps:** Microsoft Azure, Azure App Service, Azure DevOps, GCP, Docker, CI/CD, Git, Terraform
- **Data & Analytics:** SQL, PostgreSQL, PySpark, ETL/ELT, SharePoint, Power BI, Grafana, InfluxDB, BigQuery
- **QA, Security & Networking:** Playwright, Functional/API/Performance Testing, Test Strategy, RBAC, SSO, OAuth, TCP/IP, MQTT
- **AI Engineering:** Generative AI, Qwen, Ollama, Local LLMs, Semantic Embeddings, ML Algorithms, RAG concepts

PROFESSIONAL EXPERIENCE

DELCO AUTOMATION INC

May 2025 - Aug 2026

Software Automation Engineer | Saskatoon, SK

Python, TypeScript, FastAPI, Next.js, Azure App Service, Microsoft Graph API, Playwright, PostgreSQL, Git

- Nominated for Rookie Rockstar of the Year from the pool of new joiners.
- **Major Deliverables:**
 - Developed a full-stack performance testing application using TypeScript, Python/FastAPI, and Playwright to monitor API performance and system telemetry across 15+ machines and 50+ virtual users, reducing regression effort by 80% and saving 50+ hours per release cycle.
 - Created a Qwen 3 AI analytics chatbot that let users request monthly performance reports, summarized key KPIs, identified bottlenecks, and suggested likely causes from captured telemetry.
 - Led end-to-end QA for a live IoT analytics platform across 10+ features, owning functional, API, regression, and performance test strategy while supporting Product Management with feature requirement validation as a product subject-matter expert.
 - Built a client-server automation tool to capture system metadata and real-time performance metrics from 15+ workstations, improving visibility into application and workstation performance.
 - Automated Grafana dashboard migration with a framework that migrated 90+ dashboards in under 2 minutes, saving 300+ hours of manual engineering effort and improving deployment consistency and reliability.
 - Built a full-stack business application using Next.js, Microsoft Graph API, and SharePoint, and designed its cloud deployment using Azure App Service with Easy Auth, SSO, OAuth, and RBAC to deliver secure, production-ready access for 10+ sales and site support engineers.
- **Operations & Team Enablement:**
 - Worked cross-functionally with Product Management, site support, sales, and engineering teams to validate stakeholder requirements, streamline product delivery, and close technical gaps through each release cycle.
 - Supported customer calls and on-call troubleshooting with site support engineers to diagnose product and feature issues and guide technical resolution.
 - Demoted automation solutions, trained team members, and led knowledge-transfer sessions to improve adoption and long-term ownership.

TECK RESOURCES

May 2024 - Jun 2024

Data Developer I | Calgary, AB

Python, SQL, PySpark, Azure DevOps, Terraform, Docker, CI/CD, Git

- Developed real-time PySpark data pipelines in Azure DevOps to migrate and integrate 8M raw records from multiple sources, improving software performance and supporting cloud cost savings.
- Maintained 98% uptime for streaming and batch pipelines and resolved a critical production issue, enabling a major update to deploy ahead of schedule.
- Collaborated with software, data, infrastructure, and business teams in Agile delivery to troubleshoot integrations, coordinate deployments, and deliver reliable data solutions.

TECK RESOURCES

May 2022 - Apr 2024

Software Engineering Co-op - Advanced Analytics | Vancouver, BC

Python, SQL, Power BI, React.js, ETL, Git

- **Major Deliverables:**
 - Led development of ML analytics on 2+ years of coal and operational data to monitor alarm metrics against defined business rules and surface key KPIs, trends, and performance insights.
 - Built Power BI dashboards with DAX to compare operational performance across multiple sites in one view, highlighting major alarms, KPIs, trends, and site-level performance.
 - Developed Python analytics and ETL workflows that reduced false-positive alerts by 20% and delivered \$10K in maintenance savings.
 - Recognized for strong internship performance and selected by RACE21 / Digital Analytics senior leadership to automate CRM and team workflows while supporting project coordination, priorities, and reporting for directors and managers.
 - Built a web application integrated with Power BI to improve cloud cost visibility and reporting, increasing reporting accuracy by 30%.

TECK RESOURCES

May 2021 - Dec 2021

Digital Systems | Sparwood, BC

Python, SQL, GCP, Azure, InfluxDB, BigQuery

- Developed a software technician package with troubleshooting and diagnostic tools for onsite engineers, reducing technical issue resolution time by 20%.
- Analyzed GCP and on-premises sensor data and used SQL to reconcile InfluxDB and BigQuery discrepancies, improving data integrity and downstream reporting.

TECK RESOURCES

Jan 2020 - Dec 2020

Business Improvement | Sparwood, BC

Python, Machine Learning, Data Analytics, Data Preprocessing

- Maintained Python-based analytics software for monthly maintenance reporting and prepared operational data for machine-learning predictions, contributing to over \$200K in cost savings.
- Adjusted KPI metrics and created analytics reports under tight timelines to support monthly maintenance reviews, operational planning, and data-driven decision-making.

TETRA TECH

May 2019 - Aug 2019

Project Engineering | Edmonton, AB

C++, Systems Programming, MATLAB, MQTT, Git

- Developed a C++ systems application to automate extraction of 100TB of site data and generate operational site reports.
- Developed a real-time sensor visualization POC using Qt and MQTT for train and LiDAR data, streaming information to a central server and distributing updates to subscribed stations.

PROJECTS

AI Career Intelligence Platform

Jun 2026

Python, PostgreSQL, Ollama (Gemma 3)

- Developed a full-stack AI career platform using semantic embeddings, vector similarity search, and local LLMs for ATS-style job matching, skill-gap analysis, and resume customization across 7+ evaluation categories.

District That Matters - Capstone GPA 3.7/4.0

Apr 2024

JavaScript, React/Leaflet, Flask, Python

- Developed an interactive platform to analyze gerrymandering by comparing electoral district boundaries with census-driven alternatives, processing 8GB+ of census data and 10+ demographic features with OLAP, Flask, and React/Leaflet for fast backend analytics and interactive visualization.

EDUCATION

University of Alberta

2024

Bachelor of Science (BSc), Software Engineering Co-op