Haashir Khan

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Education

University of Toronto **Expected May 2026**

Bachelor of Science in Computer Science, Minoring in Business

Relevant Coursework: *Machine Learning, Neural Networks & Deep Learning, Artificial Intelligence*

Work Experience

Automation and Systems Analyst Intern **August 2025 – December 2025**

Perimeter Institute of Theoretical Physics | Azure, Docker, PostgreSQL, Prisma, Ansible, PowerBi *Waterloo, ON*

- Automated health checks for 60+ services using Ansible, cutting execution time from 2 days to <5 minutes (99%)
- Implemented an Azure ETL pipeline processing 2M+ emails, automating ingestion via PowerShell, SharePoint, and Power Automate
- Engineered a real-time monitoring platform for 40+ services, reducing check latency 30× (5 min to <10s) using Next.js, PostgreSQL, Docker, Prisma, NGINX
- Built Power BI dashboards over 1K+ Jira issues via Jira REST API + advanced JQL, enabling real-time engineering insights
- Developed an interactive Power BI email security dashboard analyzing 3 years of enterprise data at scale

Software, Cloud and DevOps Intern **May 2025 – August 2025**

Perimeter Institute of Theoretical Physics | JavaScript, Bash, Microsoft Azure, Salesforce *Waterloo, ON*

- Engineered a restartable PDF compression script for ETL pipeline, reducing average size of 20K+ PIRSA files by 83% and saving 800+ GB in storage
- Refactored the node-red-contrib-salesforce open source library to use jsforce, improving efficiency by 96% by reducing API calls from 36K to 1.5K/month
- Built an Azure-hosted CRON tool using JavaScript, HTML and CSS to periodically auto-generate documentation for 200+ Node-RED services, reducing lookup time by 40%
- Upgraded the node-red-contrib-okta open source library with SSO and group-based access, eliminating manual login and reducing access errors by 90%
- Benchmarked and integrated NVIDIA Parakeet AI for physics lecture transcription, replacing OpenAI's Whisper model and achieving a 320× faster transcription with 95% accuracy

Software Developer Intern **May 2022 – August 2022**

Univeris Corporation | Python, Golang, SQL, PyTest, GoTest *Toronto, ON*

- Optimized Python and Golang data pipelines by using parallel processing techniques and efficient memory management reducing execution time by 48%
- Leveraged PySpark for distributed data processing, improving performance on large-scale financial datasets and reducing batch processing time by 55%
- Improved automated KYC data validation, adding automated error detection and correction mechanisms, reducing onboarding errors by 23%
- Refined SQL indexing strategies reducing query time by 36% for large-scale financial datasets
- Developed and implemented automated test suites using PyTest and GoTest, increasing test coverage by 45% and reducing critical bugs by 30%

Projects

NFL Prediction Model **September 2024 – December 2024**

Python, PyTorch, Pandas, NumPy, Jira *Github | Report*

- Developed a quantitative Mixture of Experts (MoE) model integrating RNN, CNN, and MLP architectures to predict NFL game outcomes, achieving a 10% accuracy improvement
- Processed and engineered features from the Big Data Bowl 2025 dataset (52M+ rows), including spatio-temporal tracking and game metadata
- Conducted exploratory data analysis to validate key insights, such as home-team advantage and percentile-based player metrics, improving feature selection and interpretability

Skills

Programming Languages: Python, JavaScript, SQL, Java, Go
Frameworks & Libraries: Next.js, PyTorch, TensorFlow, Scikit-Learn, Pandas, NumPy, Matplotlib, Seaborn
Tools & Platforms: Power BI, Docker, AWS, PostgreSQL, Git, Unix/Linux, Microsoft Office Suite
Developer Skills: Object Oriented Programming (OOP), Data Structures, Algorithms, Agile, Machine Learning (ML), Data Visualization, Neural Networks