

Henry Zhang

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EDUCATION

University of Waterloo

September 2020 – June 2024

Bachelors of Computer Science

Waterloo, ON

- NSERC Undergraduate Student Research Award (2021)

EXPERIENCE

Microsoft

May 2023 - August 2023

Software Engineer Intern - Outlook Copilot Team (Backend)

Redmond, Washington

- Designed and implemented efficient prompt management system using an ObjectStore Database facilitating improvements in the quality of the Generative AI responses to Outlook Copilot
- Cut worldwide deployment time for GPT-4 prompts for Outlook Copilot from 2 weeks to 4 minutes (99.9% improvement)
- Added support for versioning, A/B testing and automated roll-out/rollback of GPT-4 prompts in any deploy ring
- Implemented caching to greatly reduce load on ObjectStore database and decrease request latency

Microsoft

June 2022 – September 2022

Software Engineer Intern - Outlook API Gateway Team (Infrastructure)

Vancouver, British Columbia

- Expanded telemetry and dashboards for latency, reliability and availability for Outlook using C# and the ASP.NET framework
- Collected error info of API endpoints serving 400+ million active users using Azure Application Insights
- Reduced noise on reliability monitors by 98.8% using error categorization
- Cut loading time by 90% on Jarvis Dashboards by replacing database queries with pre-aggregate functions
- Implemented latency tracers with the .NET ITracer Interface to track latency of internal Outlook API Gateway operations

Arctic Wolf

January 2022 – April 2022

Software Developer Co-op - Managed Risk (Tools/Full-Stack)

Waterloo, Ontario

- Eliminated security gaps by developing a data cross-referencing service to identify and classify client devices using Elasticsearch
- Shortened on-boarding process for new enterprise customers and increased security coverage by developing Python scripts for automating on-boarding workflow tasks
- Built customizable report generation template for security metrics using Django

University of Waterloo

May 2021 – August 2021

Software Developer Co-op - Faculty of Engineering (Full-Stack)

Waterloo, Ontario

- Launched Secure File Sharing web application allowing users to share files with a key that is not reused or stored
- Deployed real-time database using Firebase and node.js, integrating Google Drive API and Microsoft Graph API
- Added support for the file sharing service to support sharing using Google Drive and Microsoft OneDrive

PROJECTS

Stock Market Sentiment Analysis | Co:Here NLP, MongoDB Atlas, Heroku, Redis, Chart.js

- Constructed Machine Learning model measuring market sentiment using co:here natural language processing APIs on news articles
- Created customizable data visualization of market sentiment over time using Chart.js

Reddit Liberation | JavaScript, Google Chrome API

- Developed a Google Chrome extension in order to selectively restrict access to Reddit pages based on a whitelist/blacklist set by the user
- Utilized Chrome Storage API to sync user settings on different devices
- 2.2k+ Installs, 4.9 star rating on Google Chrome Web Store

TECHNICAL SKILLS

Languages: C#, Python, C/C++, Java

Frameworks: ASP.NET, React, Node.js, Microsoft Azure, AWS, Firebase, Elasticsearch, Express.js

Technologies: GPT-4, Co:Here NLP, Heroku, MongoDB