Henry Zhang

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EDUCATION

University of Waterloo   September 2020 – June 2024
Bachelor of Computer Science   Waterloo, ON
- NSERC Undergraduate Student Research Award (2021)

EXPERIENCE

Microsoft   May 2023 – August 2023
Software Engineer Intern - Outlook Copilot   Redmond, Washington
- Designed and developed GenAI prompt management system with ObjectStore Database cutting worldwide GPT-4 prompt deployment time 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 Semantic Kernel prompt templates to facilitate long term iterative improvements in the quality of Copilot responses
- Implemented caching to greatly reduce reads on ObjectStore database and decrease average request latency for 600+ Copilot early access program customers

Microsoft   June 2022 – September 2022
Software Engineer Intern - Outlook API Gateway   Vancouver, British Columbia
- Expanded telemetry for latency, reliability and availability for Outlook Microservices serving 400+ million active users by implementing Azure Application Insights with the ASP.NET framework on Outlook API Gateway
- Reduced noise on Gateway reliability metrics by 98.8% by adding telemetry and improving error categorization, facilitating decrease in incident response times and long term improvement in reliability
- Implemented latency tracers for Outlook API Gateway operations, enabling visibility for future latency reductions
- Added pre-aggregate functions to reduce loading time of latency, reliability, availability dashboards by 90%

Arctic Wolf   January 2022 – April 2022
Software Developer Co-op - Managed Risk   Waterloo, Ontario
- Created data cross-referencing service to find and classify devices on client networks using Elasticsearch over ingested logs of 2k+ enterprise networks allowing security engineers to eliminate overlooked security gaps
- Shortened on-boarding process for new customers and increased security coverage by developing Python scripts for automating on-boarding workflow tasks
- Built report generation template for security metrics with Django serving 4k+ businesses

University of Waterloo   May 2021 – August 2021
Software Developer Co-op - Faculty of Engineering   Waterloo, Ontario
- Launched Secure File Sharing web application allowing users to share files with a key that is not reused or stored, applying on research by Professor Amir Khandani
- Deployed real-time database using Firebase and node.js, integrating Google Drive API and Microsoft Graph API
- Enabled file sharing service to support sharing using Google Drive and Microsoft OneDrive

PROJECTS

Stock Market Sentiment Analysis | Cohere NLP, MongoDB Atlas, Heroku, Redis, Chart.js
- Utilized Cohere natural language processing to measure market sentiment using on news articles
- Competed in TOHacks 2022 hackathon
- 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
- 2.9k+ Installs, 1k+ users, 4.75 star rating on Google Chrome Web Store

TECHNICAL SKILLS

Languages: C#, Python, C/C++, Java, JavaScript, TypeScript
Frameworks: ASP.NET, React, Node.js, Firebase, ElasticSearch, Express.js, Django
Technologies: Microsoft Azure, Microservices, ObjectStore, GPT-4, Co:Here NLP, Heroku, MongoDB