Resume

Yipeng Xin

Applied Program: **Computer Science & Engineering M.S.E.**

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✉️ Yipeng.Xin@ibm.com

🐙 Github

in LinkedIn

🖥️ Technical Skills

Programming Languages
Proficient: Python, TS/JS
Intermediate: Java, Haskell

Frameworks & Tools
Django, Flask,
NodeJS/ExpressJS, ReactJS
NumPy, Pandas, Scrapy,
Prefect
MySQL, SQLite, Db2, Redis

Others
Ubuntu/Linux OS
Docker/Podman, Kubernetes
Azure, IBM, Alibaba Cloud

🏆 Awards

Microsoft Research AI School
Excellent Project Award (3rd prize, 2021)

McMaster President's
Entrance Scholarship

Certificate of Distinction in the **Canadian Computing Competition**
(Junior 2017 & Senior 2018).

🌐 Hobby

Cooking | Table tennis

Photography

🎓 Education

McMaster University   Sept. 2018 - April 2023
Hamilton ON   GPA: 3.9

- **Honours Computer Science Co-op**
- Bachelor of Computer Science / Minor in Economics
- Teaching Assistant of **Algorithms and Complicity** (CS 3AC3) and **Object-Oriented Programming** (CS 2OP3)

💼 Work Experience

Backend Developer   July 2023 - Present
IBM Canada Software Lab, Markham, ON

- Conducted backend development with **Javascript** and **Typescript** for the IBM Watson Assistant product, a conversational AI platform that helps businesses to build and deploy chatbots.
- Integrate the assistant backend with different "channels", such as Slack, Facebook Messenger, and SMS, to ensure the consistency of the user experience across different platforms. Developed the integration with MS Teams (with Azure Bot Framework).
- Migrated existing microservices from **Java (Spring)** to **NodeJS (ExpressJS)** to improve the maintainability. Migrated internal RESTful APIs to **gRPC** to improve the performance of complex chatbot conversations.

Extreme Blue Technical Intern   May 2022 - Sept. 2022
IBM Canada Software Lab, Markham, ON

- Worked with 3 other interns to independently develop a solution for IBM Watson Assistant to increase the user engagement rate of the product.
- Built a new feature with **Flask** and **ReactJS** that allows Assistant to generate interactive help pages based on the existing conversation flows, which can be embedded into the company's website.
- In the user tests conducted with internal and two external clients, the new feature has increased the user engagement rate by **2.5 times**. Also reduced the man power needed to maintain both the help articles and the chatbot content.

Development Intern   Sept. 2020 – Sept. 2021
Microsoft Research Asia, Beijing, China

- Analyze the huge number of incidents that emerged from the **Azure** systems and their mitigation steps, develop internal tools to automate the procedures in the life cycle of each incident, detect or even predict the outage, thereby improving the stability of the Azure infrastructures.
- Responsible for the maintenance and development of an internal tool for estimating and predicting the radius of the impact of outages. Optimized the performance of **Kusto** queries to allow it to handle the alert storm caused by major accidents, and successfully migrate the tool to the Office 365 team's incident management platform.
- Also participated in the development of the front-end visualization for our tools with **ReactJS**, and the design of the data monitoring and processing pipelines with **Azure Data Factory**.

Voluntary Programming Course Tutor
March – June 2017

Bronte College, Mississauga, ON

- Holding 1.5-hour-long after school tutoring sessions three times a week for students attending grade 11 and 12 Java or Python courses
- Prepared organized course content handouts, as well as inspiring review questions that help students to deepen the overall understanding of the programming concepts

🍴 Project

Starsector Chinese Forum
April 2018 - Present

www.fossic.org

- Developed and operated a specialized online forum and officially recognized player community for an indie game "Starsector", with **5k unique visitors per week and 40k registered users**
- Deeply customized an existing PHP and JS-based CMS to meet the modern security and user experience demands, including a **responsive mobile interface** for non-PC users
- Use **Object Storage Services and CDN network** to optimize the website and attachments access performance

Hack the North - Memoritis
September 2019

devpost.com/software/memoritis

- A visualized web app to preserve and share valuable memories with others with similar experiences powered by NLP and machine learning, **responsible for the front-end UI design and implementation**.
- Backend implemented in Python with **Flask application server**; Google Video Intelligence APIs and word2vec were used to extract the features of uploaded videos and build the connectivity graph
- The frontend is implemented as a single-page app (SPA) built with **ReactJS** and bootstrap, graph visualization implemented with cytoscape.js.

Danmaku Filtering Tools for Bilibili.com
June 2016 - Sept. 2018

github.com/jnxyp/Bilibili-Block-List

- A pattern matching based Danmaku (video comments) filtering tool for Bilibili.com, a famous online video-sharing community in China
- Using **regular expressions** to match and filter vulgar words and unfriendly speeches, such as racial or geographical discrimination contents and able to merge and streamline repetitive contents with edit distance and other NLP algorithms
- **300+ stars** on GitHub, with 20+ forks