ANDY ZHAO

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EDUCATION

University of Waterloo - Bachelor of Computer Science Co-op   2020 - Present

EXPERIENCE

Software Developer | JANA Corporation   Sept 2024 - Dec 2024

Risk analysis and data management platform   C# | .NET | SQL | TypeScript | React | Tailwind CSS

- Led the development of a flagship risk analysis and data management platform using C#, Entity Framework, SQL, and React, serving **42+** North American natural gas companies and generating **$6+ million** annually in licenses
- Built advanced frontend features such as dynamic ECharts visualizations, AG Grid formatting with color-by-value functionality, and interactive ArcGIS maps, simplifying the analysis of **200+** datasets and enhancing user satisfaction by **20%**
- Optimized SQL queries and backend APIs within a .NET 8 microservice architecture, reducing load times by **50%** and increasing user retention by **30%**
- Facilitated standups, sprint demos, and retrospectives as Scrum Master, fostering a culture of continuous improvement that boosted actionable outcomes by **40%**

Software Engineer | Manulife Financial   May 2024 - Aug 2024

Web app development for operational efficiency   Python | React | Azure | Terraform | Docker | Java

- Independently designed and developed a cloud-based web app using TypeScript, React, and Azure, incorporating a custom ETL pipeline built to deliver immediate data access for Manulife's executive leadership and **6+** cross-functional teams
- Architected a high-performance backend with **FastAPI** to host secure RESTful APIs that integrate with various third party services, enabling real-time operational decisions and accelerating data retrieval speed by **90%**
- Automated the provisioning of **Azure Functions** with private endpoints using Terraform, implementing secure network configurations, including virtual networks, DNS zone links, and access restrictions, to meet enterprise-grade security protocols

Software Engineer | EzeeAssist   Sept 2023 - Dec 2023

Backend software development for chatbot system   Python | JavaScript | AWS | PostgreSQL | MongoDB

- Developed a **Django** platform from design to execution, encompassing model creation, API development, and custom admin page design, to manage and process data for **2000+** chatbot users
- Automated tedious client onboarding processes with **Django** and **Node.js**, accelerating the onboarding speed by **>97%** and enabling the addition of **200+** clients within 2 months
- Built Amazon **SNS** and **SQS** pipelines along with **30+ REST APIs** to achieve real-time synchronization of critical data updates between various microservices and optimize frontend operations

Application Developer | Allstate Insurance Co of Canada   May 2022 - Aug 2022

Backend system and software enhancements   Python | C# | PowerShell | Java | JUnit

- Developed a file processing engine using Python, generating over **3 million** policy documents, saving over **1700 hours** of recurring manual work, and resolving **52k** customer requests to download policy documents
- Scripted service lifecycle management in PowerShell, resulting in significant time savings of several hours **(>2hrs)** per week

Software Developer | Benevity   May 2021 - Aug 2021

Multi-feature employee engagement Slack application   Python | AWS Lambda | AWS API Gateway | Terraform

- Independently concepted, designed, developed, and documented first ever **company-wide Slack application** with **Python** dedicated towards increasing employee engagement with charitable causes
- Provided users with a suite of commands that boosted employee participation in volunteering and charity donations by **28%**

PROJECTS

Ghosted | Website, **GitHub**

- Created a **full stack** web application with React, Node.js, and SQLite, that conducts **data analytics** on a user's iMessage and Contacts database to provide unique insights into one's relationships and texting habits

TECHNICAL SKILLS

Languages | Python, TypeScript, JavaScript, C++, C#, C, HTML/CSS, Java, SQL, Kotlin, Swift, PowerShell
Frameworks/Tools | Angular, React, Tailwind, Node.js, Django, MongoDB, Redis, PostgreSQL, SQLite, Git
Testing/Deployment | Amazon Web Services, Azure, Terraform, Docker, JUnit, Jest, Selenium, Pytest, Mocha, Chai