Joshua **Ji**

NEW GRAD SOFTWARE ENGINEER

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Work Experience

NanosticsDX   *Edmonton, AB, CA*
DATA SCIENCE & DEVOPS INTERN   *May 2023 - August 2023*
- Built an Azure Machine Learning pipeline to build, test and deploy a machine learning model
- Created a web app using Django and Vue to interact with the model, hosted on Azure App Service
- Automated and Containerized web app deployment using Github Actions and Docker

Speechdojo Education Foundation   *Edmonton, AB, CA*
SOFTWARE ENGINEER   *June 2021 - Current*
- Using PHP, HTML and CSS to create a custom theme on top of Moodle
- Streamlined onboarding and environment setup process for new members using Devcontainers
- Using Digital Ocean to host our website, and Github Actions to automate deployment

Major League Hacking   *Remote*
PRODUCTION ENGINEER FELLOW   *June 2022 - August 2022*
- Created an web app using Python, Flask, Jinja, MySQL, Nginx, and unittest
- Automated testing and deployment to Digital Ocean using Github Actions
- Dockerized applications and used Grafana to monitor for CPU and Memory and alert on failure

Projects

Gazprea Compiler
A SEMESTER-LONG COMPILER PROJECT FOR THE GAZPREA LANGUAGE   *October 2023 - December 2023*
- Collaborated in a 4-member team to develop a compiler using ANTLR4 and C++.
- Implemented Def/Ref, typecheck, and code generation passes over the AST.
- Developed a runtime library in C to support the Gazprea language.

Devcontainer Features
CUSTOM FEATURES FOR DEVELOPMENT CONTAINERS   *May 2023 - current*
- Created community features for VSCode Devcontainers with bash scripts
- Integrate them into the Devcontainer community, accumulating over **20k total downloads**

Idris 2 Docker
MULT-ARCH, MULTI-DISTRO DOCKER IMAGES FOR THE IDRIS2 LANGUAGE   *August 2022 - Current*
- Used Github Actions to build and deploy images to Github Container Registry
- Developed a Cron Job to keep the latest tag in sync with changes in the Idris Language repo via Github Actions

MathTTS
LATEX VOICEOVER FROM AN IMAGE   *January 2023*
- Deployed a Flask server on Google Cloud Run to extracted LaTeX from an image and convert it to speech
- Built a Next.js app with React, Typescript, Tailwind, and XState to upload files and display the results, hosted on Vercel
- Automated deployments using Google Cloud Build

Education

University of Alberta   *Edmonton, AB, Canada*
BSC. SCIENCE, HONORS IN COMPUTING SCIENCE; GPA: 3.8/4.0   *September 2024 - May 2024*
- Member of TeamUP Science, Student Team for Alberta Rocketry Research
- Recipient of Faculty of Science Undergraduate Scholarship

Skills & Interests

DevOps	Docker, Github Actions, Google Cloud Platform, Microsoft Azure, Linux
Full Stack	Node.js, Next.JS, REST API, React, Django, HTML, CSS, PostgreSQL
Programming	Elm, Python, Typescript, C++, LaTeX, Bash
Hobbies	Volleyball, Cycling, Hiking, Reading (mostly SciFi)