Kevin Pietruszka

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Education

Georgia Institute of Technology *Atlanta, GA*
Master of Science in Computer Science *01/2023 - 12/2023*

Georgia Institute of Technology *Atlanta, GA*
Bachelor of Science in Computer Science *08/2019 - 12/2022*

Experience

Battelle *Columbus, OH*
Cloud Engineer Intern *05/2023 - 10/2023*
- Implemented Terraform to deploy a Microsoft Teams remote app on Azure, complying with CMMC Level 2 standards, replacing a high-cost Webex contract.
- Developed and deployed Docker containers within Azure Resource Groups as secure proxies for pip and apt, streamlining package installation.
- Crafted GitHub Actions using Chocolatey to implement a robust CI/CD pipeline for custom SKU images, reducing deployment workload.
- Automated Azure AD group and resource creation for remote desktop workloads through Bash scripts utilizing Azure CLI.

GTRI *Atlanta, GA*
Software Engineer Intern *05/2022 - 07/2022*
- Researched novel approaches to Machine Learning/AI training visualization, enhancing model understanding with Python, TensorFlow, and PyTorch.
- Collaborated in an Agile team to build a full-stack React web application using JavaScript for new visualizations, integrating a Python Flask REST API connected to a MongoDB database.

Projects

Advising Pathways
- Developed a React-based web application to streamline college curriculum exploration, featuring interest surveys, a gamified schedule builder, and interactive course prerequisite visualizations.
- Designed a Node.js backend with MySQL database integration for efficient data management.

Chat Room
- Implemented a command-line chat application with UDP/TCP communication options, ensuring robust and efficient data transfer using C++.

Chess Tactic Classification
- Trained an AI model using Python, Pandas, NumPy, TensorFlow, and scikit-learn to classify strategic tactics employed in chess engine-recommended moves, leveraging the Lichess chess puzzle database.

FlexBros
- Developed a cross-platform web application using TypeScript, React, and Ionic for creating personalized workout routines and logging daily performance through an interactive calendar.
- Integrated Firebase for secure OAuth 2.0 authentication and deployed a scalable NoSQL database system using JSON for efficient data storage.

Horizontal sharding Experiment
- Developed and evaluated various horizontal sharding techniques and network architectures in Python to optimize performance, scalability, and resource utilization for large-scale databases.

Image Description for the Visually Impaired
- Trained a VQA model using Python with PyTorch, to generate detailed image descriptions by forwarding image captioning model output to prompted LLMs that generated questions for the VQA.
- Created a user-friendly web application with Text-to-Speech functionality, enabling users to upload images and interact with the VQA model by asking questions.

Skills

Languages: Java, Python, Rust, JavaScript/TypeScript, C/C++, SQL, HTML, CSS
Technologies: Git, GitHub, Azure, AWS, GCP, Firebase, Apache Spark, MongoDB, MySQL, Debian/Ubuntu