Akemi Izuko

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EDUCATION

University of Alberta Edmonton, Canada
BSc. Honors Computer Science, Minor in Mathematics *Sept. 2020 – April 2024*
  Courses: Compiler Design, Mobile Robotics, Practical Algorithmics, Parallel and Distributed Systems
  Major GPA: 3.95/4.0

EXPERIENCE

Machine Learning Engineer Dec. 2023 – March 2024
Monark *Calgary, AB*
- Trained large language models, on Google Cloud, to facilitate role play for leadership training
- Built a json-driven REST-API frontend to automate conversation testing and data collection
- Created REST API endpoints in the React backend to interface with GCP's API

Data Governance Intern May 2023 – August 2023
Servus Credit Union *Edmonton, AB*
- Cleaned up customer address and account records in an on-premise data warehouse, using Pandas and SQL Server
- Used Azure DevOps to facilitate an agile scrum methodology, with daily standups

Teaching Assistant Sept. 2022 – Present
University of Alberta *Edmonton, AB*
- Lead the Development of new C programming exercises for a mandatory undergraduate CS course
- Helped students understand pointer arithmetic and intermediate data structures in weekly 3 hour sessions

PROJECTS

Real Time Content Moderation | *Sockets, RPC, PyTorch, PyAudio, Ollama* Jan. 2024
- Built a real-time moderation tool for Discord calls in a 24h hackathon using LLMs
- Placed 2nd out of 171 participating teams at HackED 2024

Personal Website | *Astro.js, SvelteKit, avif, Sass* Dec. 2023
- Developed a mobile-responsive website for blogging

Gazprea Compiler | *C++, LLVM, MLIR, Woodpecker CI* Sept. 2023 – Dec. 2023
- Built a complete compiler to emit and lower LLVM from a custom ANTLR4-generated frontend
- Personal contributions include designing most the frontend, maintaining the CI, and leading the PR reviews

Identifying Mange in Coyotes | *Pytorch Lightning, DVC, Github Actions* Jan. 2023 – April 2023
- Helped setup locally-hosted Github Actions to train over 600 models over 2 months
- Worked with the biology department and local city administrators to collect over 60,000 camera trap images
- Co-authored a paper detailing our findings and results

Shōbu | *Rust, gRPC, Sockets, Tokio* Dec. 2022
- Developed Monte-Carlo bots to compete with human players in a board game
- Established asynchronous Inter-Process Communication between bots, using gRPC and Proto3 on a Tokio runtime

EXTRACURRICULAR

Autonomous Robotic Vehicle Project | *Docker, PyTorch, DigitalOcean, ROS 2* Jan. 2023 – Present
- Managed the club server for over 40 members
- Automated services with systemd and containerized each with docker
- Setup a network of reverse proxies, load balancers, and authentication gateways

Undergraduate Artificial Intelligence Society | *Numpy, Pandas* May 2022 – May 2023
- Hosted introductory workshops in Numpy and Pandas for undergraduate students
- Co-lead the Hex board game bot competition for undergraduate students

Technical Skills

Languages: Python, Rust, Typescript, C/C++, SQL Server
Developer Tools: Git, Docker, Systemd, Github Actions, DigitalOcean, Linux, Neovim
Libraries: React, PyTorch Lightning, Tokio, Numpy, Svelte.js, Pandas