INSOO SON

Software Developer | Backend & Web Development
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Education

Bachelor of Science, Computer Science   May 2025 – Apr 2028
Western University   Ontario, Canada
Advanced Diploma, Computer Programming and Analysis   Sep 2021 – Dec 2024
Fanshawe College   Award: Dean's Honor Roll   Ontario, Canada

Experience & Projects

Custom Language Model   Aug 2025 – Sep 2025
https://github.com/insooeric/LLM_Small
- Built a custom text-generation **language model from scratch** in Python (PyTorch).
- Achieved 80.5% faster training steps and 45% higher throughput by tuning optimizers and compute settings, while reducing training perplexity.
- Applied parameter-efficient methods to reuse weights, cutting memory usage by ~40%.
- Designed a large-scale data loader enabling machines with limited memory to process billions of tokens across pretraining and fine-tuning.
- **Built training infrastructure** and evaluated faster attention mechanisms to improve training throughput and inference latency.

Stemma   Jan 2025 – Apr 2025
https://stemma.vercel.app/
- Built a **web service** that generates live badges showing GitHub project statistics for developers.
- Added **secure login** with session management to protect user accounts and data.
- Optimized API performance using parallelization, cutting latency by ~50% and allowing thousands of badge renders per day under load.
- Stored images on Google Cloud Platform for persistent hosting and automatic updates.
- Deployed a containerized system with logging and error handling to keep the service **stable in production**.

Gomoku AI   Jan 2025 – Jan 2025
https://github.com/insooeric/Gomoku-AI
- Built an **AI** opponent for the Gomoku (Connect 5) **board game** that players can challenge through a web client.
- Developed a backend service in C# and .NET Core that takes the current board state and returns the AI's next move via a REST API.
- Implemented full game rules, win detection, and move validation so the system handles different rule sets and invalid inputs reliably.
- Used advanced **game-search techniques** to let the AI plan several moves ahead and provide challenging gameplay for human users.

Skills

Languages: Python, TypeScript, JavaScript, C#, C++
Technologies/Frameworks: React, Node.js (Express), ASP.NET Core, MongoDB, MySQL, Redis, PyTorch, NumPy, Transformers, LoRA, REST APIs
Developer Tools/Platforms: AWS, Google Cloud Platform, Vercel, Docker, GitHub Actions, Git, Linux, VS Code

Extracurricular

Western AI – Misinformation Team   Sep 2025 - Present
Developer   Ontario, Canada
- Preprocess large-scale misinformation datasets for training (cleaning, labeling, splits).
- Build reproducible Python scripts to turn raw data into training-ready datasets.
- Help design training pipelines (data loaders, evaluation, experiment tracking) for misinformation-detection models.