

EDUCATION

M.S. Computer Science, <i>Western Washington University</i>	2024 - 2025
B.S. Computer Science, <i>Western Washington University</i>	2022 - 2024

TECHNICAL SKILLS

- **Programming Languages:** Python, SQL, Typescript, C/C++
- **Deep NLP Techniques:** SFT, RL (GRPO/GSPO), PEFT (LoRA), MCP, RAG
- **Frameworks:** PyTorch, Huggingface, LangChain, SkyPilot, Verl, React, Django, Docker

EXPERIENCE

- **Contract Automation Engineer** 2025
Leviathan Games Remote
 – Automated API flows with MCP and n8n, vastly reducing glue code in backend infrastructure.
- **Research Assistant** 2023 - 2025
Western Washington University Bellingham, WA
 – Authored 2 publications and presented research as part of a panel discussion at PROFES 2025, sharing key contributions with an audience of academic and industry professionals from across Europe.
 – Fine-tune Llama embeddings for source code vulnerability detection, increasing upon the human baseline precision by 102%.
 – Conducted a case study and training program, leading to a 154% increase in consensus on the root causes of software vulnerabilities.
- **Software Engineer Intern** 2022
Leviathan Games Remote
 – Developed and tested C code on a prototype SoC for a consumer device sold at major retail outlets, focusing on performance and security in an embedded Linux environment.
 – Programmed key file management systems including configuration parsing and loading of user data.

PROJECTS

- **Decompilation Reinforcement Learning** 2025
torch, transformers, peft
 – Apply group relative policy optimization to a 7B parameter LLM, beating GPT-4.1 by 13.9% in zero-shot accuracy on C++ decompilation.
 – Utilized verl for distributing batched jobs and AWS S3 for parallel code compilation, utilizing spot GPUs for cost-efficient model training.
 – Designed a custom reward function using Levenshtein distance between the gold ASM and compiled C++ response.
- **Few-shot Multi-label LoRA Finetuning for Identifying Human Errors** 2024
torch, transformers, peft [Github](#)
 – Applied QLoRA to fine-tune Llama for multi-label few-shot vulnerability detection.
 – Implemented a supervised fine-tuning method using EOS token embedding and weighted cross-entropy loss.
- **Computational Restoration of Cuneiform Tablets** 2025
torch, transformers, peft [Github](#)
 – Reproduce shared task results submitted to EvaCun 2025 workshop and improve upon the top accuracy by 2.5x.
 – Fine-tuned Multilingual Llama LLM with masked language modeling via causal mask removal and custom masked next token prediction objective.

PUBLICATIONS

- [1] T. Hytopoulos, T. Nguyen, K. Schutte, M. Enertson, and F. Huang, “An intelligent method for identifying human errors behind software defects,” M.S. thesis, Western Washington University, Submitted to FSE 2026.
- [2] T. Hytopoulos, M. Chan, K. Roth, R. Wasson, and F. Huang, “An approach to cognitive root cause analysis of software vulnerabilities,” in *International Conference on Product-Focused Software Process Improvement*, Springer, 2024, pp. 11–26.