TRU BUI

Portland, OR| 503-906-0456 | tj.t.bui@gmail.com

EDUCATION

PURDUE UNIVERSITY   West Lafayette, IN
Bachelor of Science, Computer Science
Minor in Electrical and Computer Engineering
Cumulative GPA: 3.74/4.00
Relevant Coursework: Software Engineering, Systems Programming, Computer Architecture, Data Structures and Algorithms, Electrical Engineering Fundamentals, Programming in C

WORK EXPERIENCE

Tech4Research (VA PETALS Initiative)   Remote
Software Engineering Intern   May 2025 - July 2025
- Delivered two production-grade cloud SMS platforms (ADAPT and PEG3), automating 5,000+ monthly messages for 200+ users using Azure Function Apps, ACS, C#, and T-SQL.
- Replaced ~$40K in external contracts by independently managing full software lifecycle: design docs, implementation, testing, and deployment.
- Engineered IVR (Interactive Voice Response) and templated email services (Painease project) using Azure microservices to support veteran-focused digital outreach.
- Technologies: Azure Function Apps, Azure Communication Services (SMS, Email, IVR), C#, T-SQL, SQL Server, REST APIs, Git, Visual Studio

Purdue University, Elmore Family School of Electrical and Computer Engineering   West Lafayette, IN
Research Assistant – LPCVC 25 Project   Jan 2025 - July 2025
- Designed and executed computer vision experiments using Stable Diffusion pipelines to assess image fidelity via CLIP-MMD and FID metrics across multiple datasets.
- Automated job submissions and reproducible training runs on Gilbreth Cluster (A100 GPUs); maintained Conda environments, shell scripts, and reproducibility across experiments.
- Built and evaluated prompt-driven generation workflows to benchmark visual quality and stability of diffusion models.
- Technologies: PyTorch, Stable Diffusion, TorchMetrics, Conda, Python, Gilbreth (A100 GPU), VSCode

PROJECTS

Team Sync – Club Sports Event & Workout Coordination Platform
- Developed a full-stack web application to support event scheduling, RSVP management, and workout tracking for Purdue club sports.
- Integrated a full CI/CD pipeline using GitHub Actions to automate testing, linting, and deployment to production, ensuring reliability and rapid iteration.

MyShell – Unix-Style Shell in C
- Designed and implemented a custom Unix shell in C, replicating core command-line behaviors including tokenization, process forking, I/O redirection, piping, and job control.
- Built support for foreground/background execution, signal handling, and internal shell commands using low-level syscalls.

Simple C Compiler – Lex/Yacc-based Compiler
- Built a working compiler for a subset of the C language using Lex and Yacc, translating source code to x86-64 assembly.
- Implemented lexical analysis, recursive-descent parsing, and code generation phases.

PROFESSIONAL SKILLS

Programming Languages: C#, C, Java, T-SQL, Python, JavaScript (React.js)
Frameworks & Tools: Azure Function Apps, ACS, Lex/Yacc, Git, REST APIs
Cloud & Platforms: Azure, Firebase, Gilbreth HPC Cluster
IDEs: Visual Studio, IntelliJ, VSCode