

Davis Ernst

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EDUCATION

University of Saskatchewan

B.Sc. Computer Science

Saskatoon, SK

Expected April 2027

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, C/C++, SQL, HTML/CSS

Frameworks & Libraries: Next.js, React, Django, Tailwind CSS, Prisma, Framer Motion

Developer Tools: Git, Docker, Vercel, PostgreSQL, Node.js, Linux, Neovim, tmux, Bash/Shell Scripting

PROJECTS

Real-Time Game Analysis App | *USask Sports Engineering Club* | *Python*

In Progress

- Building a live tactical analysis tool for the University of Saskatchewan Women's Soccer Team to support in-game coaching decisions.
- Annotated real match footage and fine-tuned object detection and keypoint estimation models to track player positions and movements in real time.
- Translated non-technical requirements from coaching staff into concrete software specifications, bridging the gap between domain experts and engineering.

Shadow Basketball Website | *Next.js, PostgreSQL, Tailwind CSS, Vercel*

- Designed and deployed a full-stack web application handling player registration and tryout management for a local basketball club.
- Designed a normalized PostgreSQL schema to reliably manage player and registration data for tryouts.
- Configured CI/CD pipelines via Vercel, enabling zero-downtime deployments on every push to main.

Game Boy Emulator | *Typescript, Systems Programming*

- Built a Game Boy emulator in Typescript, replicating CPU instruction execution, memory bus behaviour, and PPU rendering.
- Implemented the full SM83 instruction set with correct flag handling, enabling successful execution of commercial ROM software.
- Achieved accurate timing through precise cycle counting and memory-mapped I/O, with rendering output driven by a custom pixel pipeline.

EXPERIENCE

General Labourer

May 2025 – Aug 2025

Wright Construction

Saskatoon, SK

- Coordinated daily task execution within a multi-person crew, consistently delivering on tight deadlines in a high-pressure environment.
- Maintained strict compliance with OH&S safety protocols, contributing to a zero-incident record across the full summer season.

Sales Associate

April 2024 – Oct 2024

Northern Factory Workwear

Saskatoon, SK

- Rapidly acquired technical product knowledge and translated complex specifications into clear, confident recommendations for customers — mirroring the requirements-gathering process used in software engineering.

Sales Associate

June 2020 – Oct 2023

Foot Locker

Saskatoon, SK

- Managed high volumes of customer interactions over three years, developing strong problem-solving and communication skills; recognized as Associate of the Month on multiple occasions for consistent performance.