

Bailey Danyluk

BSc Computing Science – University of Alberta,
SEPTEMBER 2020 – DECEMBER 2024

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EXPERIENCE

- Software Development Engineer Co-op – A Thinking Ape,**
SEPTEMBER 2022 - DECEMBER 2022, MAY 2023 - AUGUST 2023
- Enabled company to iterate on new projects faster by refactoring all services to use a composite primary key from a single primary key
 - Wrote a tool to detect queries that were only querying by single primary key and logged as needed
 - Refactored data import tool to cleanup codebase and allow imports of data with composite primary key or single primary key
 - Extended Django's migration creator to migrate databases to composite primary keys
 - Assisted in migration from AWS to Astute
 - Security improvements to Docker containers by switching them to run as an unprivileged user
 - Improved internal deployment and restart tool to be more scalable and less disruptive to other users by optimising concurrent requests to not flood workers
 - Modified internal tool to raise an informative error message if it detected VPN was not connected. This reduced support tickets and lead to faster problem resolution for users
 - Refactored Kafka producer fallback file code to reduce code complexity and make it usable across multiple destination clusters for fallback messages

Student Developer – NAIT Industry Solutions,
JUNE 2022 - AUGUST 2022

- Worked in the Unity game engine to help develop a 3D video viewer
- Added tests for pre-existing code base

PROJECTS

ACE 3

JUNE 2019 – ARMA 3 Mod

[Project Link](#)

- Lead developer who works with our users to add features, maintain and update existing ones, review pull requests, and work with the other developers for future growth of the project
- One of the most popular mods with over one million active users
- Added four major features, and helped with many smaller ones

Custom Game Engine

2017-2019 – Hobby Game Engine

[Project Link](#)

- Custom memory heaps integrated in engine to ensure memory is managed and not fragmented
- Optimised hot path allowing hundreds of thousands of entities to be simulated in real time
- Lua integration allowing quick iteration on games made from the engine
- Integrated Google's paper LiquidFun for real time CPU processing of many particles
- Custom thread pool allowing concurrent operation of subsystems
- Custom retained mode GUI for in-game UI

SKILLS

Technologies

Linux
Docker
MySQL
Postgres
Git

Frameworks

Django
Axum

LANGUAGES

Python
Rust
C
C++
C#
JavaScript
HTML/CSS
SQL
GLSL
LaTeX

INVOLVEMENT

AlbertaSat

OCTOBER 2020 – DECEMBER 2020
University of Alberta

acemod

JUNE 2019 – PRESENT
ARMA 3 Mod Team

Bourbon Warfare Group Technical Administrator

DECEMBER 2017 – JUNE 2022
ARMA 3 Group