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# JONATHAN MOALLEM

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## EXPERIENCE

### Animal Logic — **Pipeline Software Engineer**

**03/2021 – PRESENT**

- Developed and maintained VFX pipeline systems in Python and C++ for libraries, applications, and DCC plugins based on Pixar's USD 3D scene description format
- Delivered and supported high-quality, maintainable code against quarterly schedule, while working to proactively improve the health of the codebase across productions
- Collaborated with on-site and remote (Vancouver) team, participating in regular code review, agile development practices, and working to improve test coverage
- Contributed to architectural design of core functionality (such as asset resolution), and open sourcing of Animal Logic's Maya USD plugin to [Autodesk's public repository](#)

### Caps Collective — **Programmer, Designer & Co-Founder**

**02/2020 – PRESENT**

- Developed several games and software projects in Unity, Godot and Unreal, as well as developing a custom game engine in C++ as part of an open source developer collective
- Led and managed a team of six developers to publish a 3D city-builder game, *Fantasy Town Regional Manager*, on Steam, selling 1000+ copies in its first week (*see portfolio on page 2*)

### Foreign Brief — **Android Developer**

**11/2017 – 10/2019**

- Led development of Android app and consulted web API restructure for v2 overhaul

### U:PASS UTS — **Programming Tutor**

**03/2018 – 06/2018**

- Tutored students on MVC architecture and UI programming patterns in Java

### Sentia — **Junior Rails Developer**

**01/2017 – 01/2018**

- Built out and maintained several Ruby on Rails web-apps for enterprise clients

### Sudo-Code Software — **Technical Designer & Co-Founder**

**09/2014 – 03/2019**

- Released a mobile game, *Pongagon*, attaining over 20,000k downloads on iOS alone
- Led a team of three developers, managed client interaction, and handled UX&I design

### Interactive Investor — **Junior Web Developer**

**11/2015 – 08/2016**

- Developed Wordpress annual reporting sites for corporates, such as Telstra and Westfield

## EDUCATION

### University of Technology Sydney — **Bachelor of Science (Honours) in IT** (98.43 WAM)

**2019 – 2020**

- Thesis on emergent narrative, game AI techniques and engineering practices
- Published original research to IEEE Conference on Games in AI & interactive drama
- Graduated with high distinction (98.43 WAM), earning university medal

### George Mason University, Virginia — **Computer Science** (Academic Exchange)

**2018 – 2019**

### University of Technology Sydney — **Bachelor of Science in IT** (87.09 WAM)

**2016 – 2019**

- Focussing on web and mobile apps development as well as interaction design

## TECHNICAL SKILLS

### **Programming Languages**

C++	Python	Lua	Swift	JavaScript	Dart	PHP
C#	C	Java	Ruby	GScript	Crystal	Rust

### **Frameworks & Libraries**

Unreal Engine	Qt	Maya API	iOS SDK	Node.js
Unity Engine	Pixar USD	Docker	Flutter	Ruby on Rails
Godot Engine	LÖVE 2D	Android SDK	React.js	Django

### **Misc.**

Photoshop | Git | Trello/Jira | Video Editing | UX&I Design | Narrative Design | Music Production | Data Analytics

## PORTFOLIO

### **Fantasy Town Regional Manager**

Built a fantasy card-based, town-builder game in **Unity** part time with a small team, **selling over 1000 copies on Steam in its first week**

[store.steampowered.com/app/1524530](https://store.steampowered.com/app/1524530)

### **Run for Covert**

Built a fully **procedurally generated, online multiplayer**, tactical FPS in **Unreal Engine**, with **HFSM-based AI** and **intelligent cover system**

[caps-collective.itch.io/run-for-covert](https://caps-collective.itch.io/run-for-covert)

### **A Review of Agency Architectures in Interactive Drama Systems**

Published an **academic paper** on **interactive drama & AI** in the 2020 **IEEE Conference on Games**

[ieeexplore.ieee.org/abstract/document/9231655](https://ieeexplore.ieee.org/abstract/document/9231655)

### **A Dark Discomfort**

Built a **custom C++ game engine** based on **raylib** with unit testing and a **CI/CD pipeline** for testing cross-platform builds and release management

[github.com/CapsCollective/a-dark-discomfort](https://github.com/CapsCollective/a-dark-discomfort)

### **Raylib C++ Starter Kit**

Built a lightweight, portable, automated template for **raylib game engine library** projects with **C++ bindings**, using **Make** and **CI/CD tooling**

[github.com/CapsCollective/raylib-cpp-starter](https://github.com/CapsCollective/raylib-cpp-starter)

### **Daily Brief**

Built versions 1.0 and 2.0 of a commercial **Android app** for daily geopolitical updates with **subscription features**, including **tags**, **search**, and **map-view**

[play.google.com/store/apps/details?id=com.foreign\\_brief.daily\\_brief](https://play.google.com/store/apps/details?id=com.foreign_brief.daily_brief)

*Check out my [Github \(@J-Mo63\)](#), and personal website ([jonathanmoallem.com](https://jonathanmoallem.com)) to see more projects*

## OTHER ACHIEVEMENTS & HONOURS

- Won the **Game Narrative Review Gold Award** for paper **presented at GDC San Francisco**
- Selected as one of 11 amongst 8000+ students across Australia as one of **AFR's Top 100 Future Leaders** for technology
- Achieved University of Technology Sydney's **engineering faculty Dean's List** across **2017, 2018, and 2021**
- Completed **12 games in 12 months** challenge, **winning best-in-showcase awards for three separate entries**