JONATHAN MOALLEM

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EDUCATION

University of Technology Sydney — **Bachelor of Science (Honours) in IT**   **2019 - 2020**

- Focussing on emergent narrative, game AI techniques and engineering practices
- See transcript on page 4

George Mason University, Virginia — **Computer Science** (Academic Exchange)   **2018 - 2019**

- See transcript on page 4

University of Technology Sydney — **Bachelor of Science in IT**   **2016 - 2019**

- Majoring in enterprise systems development
- Focussing on web and mobile apps development as well as interaction design
- See transcript on page 3

Randwick TAFE — **Certificate III in Live Production and Services**   **2014 - 2015**

- Focussing on audio engineering for live and recorded environments

EXPERIENCE

Foreign Brief — **Lead Android Developer**   **11/2017 – 10/2019**

- Built Android app to match iOS product line and delivered major v2 overhaul
- Consulted on redesign of API architecture

U:PASS UTS — **Programming Tutor**   **03/2018 – 06/2018**

- Tutored students intermediate programming using the Java language
- Introduced students to fundamental concepts such as object-oriented programming, MVC architecture, and UI programming patterns.

Sentia — **Junior Rails Developer**   **01/2017 – 01/2018**

- Designed scalable web app architectures
- Built out Ruby on Rails applications alongside industry veterans
- Implemented industry tooling such as testing and pipelines in projects

Sudo-Code Software — **Technical Designer & Co-Founder**   **09/2014 – 03/2019**

- Managed a team of developers
- Designed and built out application UX & UI
- Ran business development and client liaison
- Released app attaining over 20,000k downloads on iOS alone

Interactive Investor — **Junior Web Developer**   **11/2015 – 08/2016**

- Worked under a senior developer to build Wordpress stylesheets
- Populated site content and performed image manipulation tasks
- Assisted in the production of annual report sites for listed corporates, including:
  - Telstra, Westfield, Scentre Group and MGC Pharma

TECHNICAL SKILLS

Programming Languages

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

Frameworks & Libraries

Unreal Engine	Processing 3	Android SDK	Ruby on Rails	React.js	Sinatra
Unity Engine	Ren'Py	iOS SDK	Node.js	Java EE	Docker
Godot Engine	LÖVE 2D	Flutter	Django	Wordpress	Jekyll

Misc.

Photoshop	Git	Trello/Jira	Video Editing	UX Design	UI Design	Dialogue Writing	Music Production	Data Analytics

TRANSFERABLE SKILLS

- <u>Teamwork & Leadership:</u> I have served as president, and vice president for two major university societies, Alpha Epsilon Pi and AUJS (Australasian Union of Jewish Students), leading internal restructuring, developing organisational strategy, and managing relationships between executive and lay members.

- <u>Team & Project Management</u>: Through my time at Sudo-Code Software I became proficient at managing team projects and I have a strong understanding of agile development techniques, frequently relying on them to effectively deliver high quality software solutions to customers.

- <u>Problem Solving</u>: For my honours-by-research degree, I spent most of my time working to deliver a thesis on emergent narrative systems for which a great deal of problem solving and analysis was performed when designing and developing the solution of a novel, AI-based drama manager.

- <u>Client Communication</u>: At both Sudo-Code Software and Sentia, I gained a great deal of experience through account management roles, communicating with clients, and managing their expectations.

- <u>Design & Creativity</u>: In many of my roles, I have been heavily involved in making UI and UX design decisions, iterating upon user feedback to deliver the most effective and enjoyable-to-use experiences.

- <u>Narrative Design</u>: During my time at George Mason University, I wrote a paper on narrative design, compiled a story-bible for a game of my own, and wrote a number of stage play scripts. I was eventually given the opportunity to present my paper at GDC in San Francisco after winning the Narrative Review Gold Award for it.

REFEREES

Referees available upon request.

PORTFOLIO

Run for Covert

- Built a fully **procedurally generated**, **online multiplayer**, tactical FPS in the **Unreal Engine**

caps-collective.itch.io/run-for-covert

Ozymandias

- Built a fantasy town-builder, collectible card game in **Unity** for a university team project

caps-collective.itch.io/ozymandias

Pongagon

- Built a mobile game in **Unity** for iOS and Android, achieving over **20 thousand downloads** to date

appadvice.com/app/pongagon/1066142339

A Review of Agency Architectures in Interactive Drama Systems

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

ieeexplore.ieee.org/abstract/document/9231655

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

A Dark Discomfort

- Built a cross-platform **custom C++ engine** based on **raylib** with a **CI/CD pipeline**

github.com/CapsCollective/a-dark-discomfort

Frost Crystal: API Framework

- Built a custom, **open-source API framework** in **Crystal** (a Ruby-like language that's as fast as C)

github.com/J-Mo63/frost-crystal

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

TRANSCRIPTS

University of Technology Sydney — **Bachelor of Science in IT**

Subject	Grade
Programming Fundamentals (Java Basics)	High Distinction
Communication for IT Professionals (Professional Development)	High Distinction
Introduction to Information Systems (System Modelling)	Credit
Web Systems (Networking Concepts & Basic HTML/CSS/JS)	Distinction
Interactive Media (Processing 3/Java)	High Distinction
Applications Programming (Java Intermediate with JavaFX)	High Distinction
Business Requirements Modelling (System Modelling)	High Distinction
Networking Essentials (Networking Basics)	Distinction
Data Structures & Algorithms (C++ Intermediate)	High Distinction
Mobile Applications Development (Android/Java)	Distinction

Introduction to Computer Game Design (Unity/C#)	High Distinction
Database Fundamentals (SQL)	Distinction
Software Engineering Practice (Web App Project)	High Distinction
Fundamentals of Interaction Design (UX)	Distinction
Systems Development Project (Web App Project)	Distinction
Career Management for IT Professionals (Professional Development)	Distinction
Application Development in the iOS Environment (iOS development in Swift)	High Distinction
Web Services Development (Java EE8 Web Development)	High Distinction
Introduction to Data Analytics (Data Analytics with Python)	High Distinction
Project Management and the Professional (Project & Team Management)	Distinction
Software Development Studio 1 (Client work on an AR app using Unity/C#)	High Distinction

George Mason University — **Computer Science** (Academic Exchange)

Subject	Grade
RS: Story Design for Computer Games (Narrative Design for Video Games)	A+
Playwriting I (Creative & Dialogue Writing)	A
Acting I (Public Speaking & Performance)	A

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

Subject	Grade
Games and Graphics Project (Analytics Research on Emergence in Games)	High Distinction
Technology Research Preparation (Literature Review in Interactive Drama Systems)	High Distinction
Technology Research Methods (Experimental Design for Computing Research)	High Distinction
Directed Study 1 (Game AI Design & Implementation)	High Distinction
Game Design Studio 1 (Team-Based, Agile Game Development)	High Distinction
Honours Project (Thesis Project on Interactive Drama Systems)	High Distinction
Advanced Games Programming (In-Depth Games Programming with Unreal Engine)	High Distinction