

# ALISTAIR LYNN

Recently graduated with a First-Class Honours degree in Computer Science from the University of Southampton. I am a highly enthusiastic participant and avid game maker. To date I have released seven games that are freely available; my experience of making games started at the age of 10 having played them since I was 7. I am looking to secure a position in a game development studio where my ability to write code that is fast *and* of high quality has the potential to be fully exploited. It is through an interest in compilers and programming language design that my understanding of the C languages has been developed to a very high level - far beyond that which was required for my degree.

Whilst capable of being self-motivated, I prefer working as part of a team and my involvement in Student Robotics (an international Robotics competition for students aged 16 – 18) as the Events Coordinator throughout my time at Southampton offered this opportunity. I not only developed valuable skills in management and organization but also teaching experience. Working with a wide range of young people of very diverse backgrounds has given me understanding and experience of the skills required to ensure clarity of communication in this field.

## RELEVANT SKILLS

- Wide range of languages Including C, C++, GLSL
- Low-level optimization including assembly
- Open GL and 3D graphics
- Scripting languages including Lua
- Formal methods including SMT solvers and advanced type systems
- Web development
- Database systems
- Programming for embedded devices
- Functional and declarative programming
- Leadership
- Project Management
- Mentoring in programming mechanics/electronics/engineering/finance
- High typing speed
- Public speaking & outreach

• *full skill set page 2*

## EXPERIENCE

PROJECT	YR	ROLE	SKILLS	KEY ACHIEVEMENT
Onlink	2006	Network Programmer	C++, network programming, integrating into large existing codebases	Basic network functionality
Xsera	2008	Programmer	C++, Lua	Bridging between C++ and Lua to present a decent scripting UI. Design of an AI system based on heatmaps.
Octodarwin	2012	Programmer Sound	Java, LibGDX,	Working closely with designers for fast prototyping. Shipping in three days.
Escape	2013	Programmer Sound	Java, LibGDX	Doubling the framerate with a Quadtree implementation in the space of half an hour shortly before hand in
Cheese Time	2013	Programmer	JavaScript & CoffeeScript, developing for the web, HTML5, entity-component systems	Integrating with a cross-compiled copy of Box2D for JavaScript that was changed half way through the production
Monorail	2013	Programmer (lead)	Java, LibGDX	Complete separation of game logic and display code. Placed 33 <sup>rd</sup> in Ludum Dare 28
Hatamari	2014	Programmer	Java, LibGDX, GWT	Simple but clever entity redistribution system to avoid entities clumping into groups
Intergalactopol	2014	Programmer (lead), Sound	Java, LibGDX, Logic Pro,	Utilised a system of tuning the sound effects to be consonant with the music

## UNIVERSITY WORK

3D graphics c/w	2012	—	OpenGL, C++, GLSL, 3D maths	Getting ambient lighting working with spherical harmonics, using a simple blending mode to give the appearance of local light from engine exhausts
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## STUDENT ROBOTICS

Competition	2012/2013	Events (committee position)	Management, event organisation, risk assessment, presentations and mentoring students	Managed team of ~35 over five-day event. In two years I oversaw a growth from 16 local teams to 36, from three countries
CyanIDE	2010	Programmer	PHP/network architecture – a design for concurrent users	Created a stable and scalable system now used by 1200 people (evidenced by data collected by Student Robotics)

## ALISTAIR LYNN | FURTHER INFORMATION

### Employment

Self-employed developing game for commercial launch March 2015

### Education

#### University of Southampton

BSc Computer Science (1<sup>st</sup> Class)

#### St Bede's, Redhill, Surrey

A-levels

- Maths (A/B)
- Music (B)

GCSE

- English (Literature) (A\*)
- English (Language) (A\*)
- Maths (A\*)
- Drama (A\*)
- Science (A/A)
- German (A)
- ICT (A)
- RE (A)
- Business Studies (A)

### Other qualifications

Dinghy Instructor

Grade 8 Bassoon

Grade 5 Music Theory

First Aid

### Technology experience

Functional Reactive Programming

Object-oriented programming

SMT solvers

Embedded systems

Web technologies

Firebase

Category Theory

OpenGL

Compilers

LLVM experience

Low level optimisation

Relational databases

Redis

Caching

Logic Programming

Logic Pro

Puppet

LaTeX

### Programming Languages

Java

JavaScript

CoffeeScript

C

C++

Objective-C

Jasmin (JVM)

Python (2 and 3)

Haskell

Idris

Agda

Assembly (PPC, x86, x86-64, ARM)

LLVM bytecode

GLSL

PHP

Shell scripting (bash/zsh)

Lua

Scheme

**Synopsis of recent project:** Development of web Python IDE for sixth form students developing software in schools. Installing new software in schools is out of the question, so a colleague and I wrote an IDE that runs on the web. This IDE is a complex web app because, amongst other things, there are several users working on each project, often at the same time. It has full integration with version control. I wrote the second version of the server-side code, that had to integrate with the previous front-end.