

Govind Venkatesh

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SUMMARY

I am motivated Computer Science student interested in video game development. Currently studying an MSc in High-performance Graphics and Games Engineering at the University of Leeds. I am from Geneva, Switzerland where I did my schooling in the IB system. I am currently living the UK to finish my studies. My interests are primarily in Video Game development and Game Engine development, but also have interests in network protocols, programming languages, AI/Machine learning applications, high-performance computing and back-end web development.

I am always looking for exciting and challenging opportunities to improve my ability to code and solve problems.

I am a persistent and hard-working person who accepts and faces challenges readily under any circumstance. Working in a team is my strong point, I am friendly, approachable and reliable.

EXPERIENCE

Assistant Software Developer

HMRC

September 2017 – August 2019, Newcastle upon Tyne, UK

As an assistant software developer, I develop, test and deploy Play web applications written in Scala and backed by MongoDB caches and databases, through the use of Cucumber and Scala Test as testing frameworks and Jenkins CI and for deployment. Furthermore, as part of the live services team, the maintenance of services is vital, which is done through checking logs using the ELK stack and Grafana to monitor running container instances.

IT intern

Atos Consulting

Agustus 2016 – September 2016, Nyon, Switzerland

IT intern at Atos Consulting Nyon, Switzerland. Work involved patching servers, computer software and operating system management.

PROJECTS

Rust as a games programming language

This project aims to explore the viability of Rust programming language as a games programming language. This is accomplished through an analysis of the development process and the creation of a sub-module of a game engine in Rust. It documents the research behind learning Rust and implementing such a sub-module (called Entity Component System). The implementation in Rust is explained and compared with modules written in C++ (the industry standard) as an anecdotal measure of performance. Finally, after a discussion and comparison of the results, it is found that Rust is a good language for small to medium sized games but not so much for big budget games.

Chirp_Bot (HackLondon2016)

virtual treasure hunt puzzle platformer game based on the interaction between PC and Android. Game makes use of Chirp.io API. I created the Android application part of this game.

God Wills It (Global Game Jam Brighton)

'God Wills It' is an exploration game of impact, set in a future where years are measured in cycles and the Hell is The Land of Lost Souls. A game that will make you question about all those aspects of your life that you thought you were in control of. I helped code game logic and some shader effects.

DreamDeep (AnvilHackII)

DreamDeep is first person interactive virtual walk-through of our own mind. I helped by providing visual assets along with art direction and support on this project.

Guardeon (Hack Junction)

Guardeon tells the story of each day by logging events that are registered through our array of sensors, allowing knowledge of the activities of those within its area. A plethora of sensors communicates with our cloud hosted database to keep track, in real time, of the cared for. The primary caregiver is also able to customize the number and type of sensors around the house to collect the most effective and meaningful data. After this data is collected insights can be made, anomalies can be detected, and most importantly safety can be ensured. I worked primarily as a back-end web developer configuring data schemas for the database.

Sparky

Sparky, a sentient spark, brought to life by pure chance on an abandoned ship during a storm! We follow his escape from the ship into the wider world, where he'll have many future adventures! In this 2D puzzle game you will... traverse, possess and dash from electrical object to electrical object making your way through the abandoned ship! Be careful, however, stay away from a source of electricity for too long and poor little sparky will fade away...

I helped design game play mechanics and code them in unity

EDUCATION

Bachelors of Science in Computer Science

University of Sussex • Falmer, East Sussex • 2019

COURSEWORK

Natural Language Engineering

Computer Science • Natural Language Processing

Opinion mining and text analytics

Machine Learning

Computer Science • Linear Algebra and Algorithms

designing and testing machine learning approaches to classification problems

Foundations of Modelling and Rendering

Computer Science • Linear Algebra, Data Structures and Algorithms

Designing data structures for modelling and developing rendering techniques

Game Engines and Workflow

Computer Science • Low level programming, Physics, Linear Algebra

Designing low level subsystems of game engines and a bouncing ball physics simulation

Scientific Computation

Computer Science • Calculus

Solving systems of non-linear equations

Comparative programming

Computer Science • Functional Programming

Understanding difference between different programming languages

Human Computer Interaction

Computer Science • Teamwork

Coordinating with people to develop a testing method for a hypothetical mobile application

Introduction to Computer Security

Computer Science • Cryptography

Applying different techniques to understand the basics of computer security

Web Applications and Services

Computer Science • Web Service Design

Designing web services using Apache Thrift and Java EE

Limits of Computation

Computer Science • Algorithms and Mathematics

Exploring the problems of NP

Databases

Computer Science • RDBMS

Designing schemas and implementing SQL queries

Parallel and Concurrent Programming

Computer Science • CUDA

Designing parallel solutions to problems in c++ and CUDA

Introduction to Operating Systems

Computer Science • Algorithms

Creating scheduling algorithms for scheduling processes

INVOLVEMENT

University of Sussex Informatics Engineering and Design Society

University of Sussex • Activities Officer • January 2016 – May 2017

Activities Officer position requires that I oversee the successful initiation, design, planning, monitoring, controlling and execution of projects run by the society.

SKILLS

C++

Scala

Rust

Java

Haskell

Unity

Unreal Engine 4