

# KARTHIK SURESH

Information and Computer engineering student with experience in software development and data modelling.

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## EDUCATION

### Engineering (MEng)

University of Cambridge

📅 10/2016 - 06/2020

- Courses include Information Theory, Statistical Signal Processing, Inference, Probabilistic Machine Learning, Deep Learning, and Computer Systems.
- Pursuing a 4th year master's project in "Sparse Principal Component Analysis".
- Created iPython notebooks to explore examples of supervised learning, unsupervised learning and dimensionality reduction methods.
- Achieved 2:1 grade in third year examinations.

### A - Levels

Cranleigh School, UK

📅 09/2012 - 06/2014

- Attained A\* grades in Physics, Chemistry, Maths and Further Maths

## EXPERIENCE

### Extreme Blue Intern (Technical)

IBM (UK)

📅 06/2019 - 09/2019

- Worked in a team of 4 interns on a client project for Aardman Animations.
- Built a pair of mobile applications to improve the engagement between two key stakeholder groups, using Unity (C#) and VueJS respectively.
- Developed an algorithm that improved video streaming speed from cloud storage by 300%, compared to the built-in Unity streaming object.
- Implemented features for content to be dynamically pushed to the Unity application from cloud resources.
- Integrated cloud functions, database services, and MQTT broker services to collect user data and enable inter-application communication channel.
- Prototype received commendation from client company's founders for technical design and attention to user needs, in final team presentation.
- Primary inventor on search algorithms related patent submission.

### Software Development Intern

I2R (Singapore)

📅 07/2018 - 08/2018

- Conducted research to investigate how Serverless web development could help the team lower infrastructure costs, improve scalability, and enhance security.
- Enabled team to continue research into Serverless by presenting a working prototype of a Serverless web application, built using AWS user management services, cloud functions, and cloud database resources (SQL).
- Improved user experience of prototype by using ReactJS to build web application interface.

### Software Development Intern

ConnectDott (Singapore)

📅 11/2017 - 12/2017

- Self taught principals of object-oriented programming using C# codebase.
- Created two new views and fixed two feature bugs within a Xamarin mobile application that enables mariners to manage maritime certificates.
- Pull request accepted for inclusion in release of app update.

### National Serviceman

Singapore Armed Forces

📅 08/2014 - 06/2016

- Completed Basic Military Training (Company Best 2.4KM Time).
- Served as a Finance Clerk in the Officer Cadet School.
- Developed models to automate financial processes and improve compliance.

## SKILLS

Python   C#   Unity   JavaScript

Cloud Resources   SQL   C++

## PROJECTS

### 2018 Dublin Datathon

#### 2nd Place team out of 30 teams

- Cleaned and organised New York state food establishment health inspection data using Python.
- Created logistic regression machine learning model in Python to predict likelihood of critical health violations.
- Received commendation for clarity in submission's analysis and presentation.

### Data Compression

#### Technical Report - Top Grade

- Investigated the storage and implementation performance of different compression methods.
- Achieved a 3:1 compression ratio using an adaptive contextual coding method implemented in Python.

### Digital Circuit Simulator

#### 3rd Year Project - First-Class Grade

- Developed the graphical user interface for a software, using Python, that simulates the behaviour of digital circuits.
- Successfully implemented bug-free 3D displays in under 3 hours for new requirement at short notice.
- Implemented unit tests to automate feature checking within the application.

## OTHER INTERESTS

### President

#### Impact Through Innovation Cambridge

- Cambridge engineering society that enables individuals to participate in technical projects that aim to tackle global challenges.
- Developed communications strategy which resulted in 60% increase in sign-up and established links with an international NGO.

### Player & Committee Member

#### Cambridge University Cricket Club

- Raised over £4000 for an overseas tour.
- Earned professional cap for Cambridge University against Worcestershire.
- Represented Singapore national team in 2017 SEA Games.