

Matthew Brookes

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Education

- **Imperial College London/ETH Zürich**

MEng Computing (International Programme of Study)

October 2015 - August 2019

- For my final year I am studying abroad at ETH Zürich where I am writing my Master's Thesis
- Relevant courses: Software Engineering, Distributed Algorithms, Machine Learning, Big Data, System Security, Data Stream Processing and Analytics, Advanced Databases, Networks
- Studied German to the B2+ standard of the Common European Framework of Reference
- Studied Spanish to the B1+ standard of the Common European Framework of Reference
- Group Projects: ARM11 Interpreter, WACC Compiler, PintOS, Dynamic Fusion (SLAM)

- **Heart Of England School**

GCSE & A-Level

2008-2015

- A-Level: Mathematics (A*), Further Mathematics (A*), Computing (A), Physics (A)
- AS-Level: French (A), History (B)
- GCSE: 12 A*, 1 A

Work Experience

- **Skyscanner**

Barcelona/London

Intern, Software Engineer

July 2017 - September 2018

- 3 month internship in Barcelona from July-September 2017, subsequent part-time position in London followed by 5 month full-time placement in Barcelona from April-September 2018
- Implemented tooling for performing online and retrospective analysis of the Garbage Collector in Java microservices
- Worked on improving the resiliency and scaling of a critical service
- Mostly worked on backend services however I also implemented large parts of the Search Controls, written in React JS

- **Filli Studios**

London

Frontend Web Developer

May 2017 - June 2017

- Member of a team producing an influencer marketplace web-based application

- **Fire Tech Camp**

London

Camp Instructor

July 2016 - July 2017

- Delivered week-long Java and Greenfoot courses to groups of up to eight students aged 12-17 during school summer holidays
- Delivered weekly hour-long Java and Minecraft course to sixteen students at Westminster Cathedral Choir School during school term-time

Projects

- **Master's Thesis** ETH Zürich
Spring 2019
 - *FASTER State Management for Strymon*
 - Implementing State Management for a Stream Processing System
 - Support larger-than-memory state in Timely Dataflow/Strymon using FASTER
 - Created an open-source Rust wrapper for FASTER (faster-rs)
- **SafeSpace** IC Hack, London
February 2018
 - *Custom moderator for online content using Microsoft Cognitive Services API*
 - Blocks images containing content from user-specified blacklist
 - Worked on the full-stack using a Golang backend and JavaScript frontend
- **Third Year Group Project** Imperial College London
Autumn 2017
 - *Reconstruction of non-rigid objects from RGDB data*
 - Won the Palantir Forward Group Project Prize
 - Non-proprietary implementation of Dynamic Fusion
 - Worked on DevOps and testing
- **Huyendo** HackUPC, Barcelona
October 2016
 - *Single Page Application for planning a multi-destination trip*
 - Worked on front-end using React
 - Accesses Skyscanner and Amadeus APIs
- **Alpaca** IC Hack, London
February 2016
 - *Android app for crowd-sourcing a playlist*
 - Produced as part of a team of four at ICHack, London
 - Native Android App implemented using Java and Android SDK
 - Worked on asynchronous calls to API and producing data models for front-end developers
 - Implemented some features of UI including Tinder style swiping

Awards

The Palantir Forward Group Project Prize	2018
Queen's Scout Award	2015
Duke of Edinburgh Gold Award	2015
IET Diamond Scholarship	2015
BCS Coventry & Warwickshire KS3 Web Design Award	2010

Skills and Interests

Languages: Java, Python, Haskell, JavaScript, React, Rust, C/C++, Elixir, Golang, L^AT_EX, PHP, CSS

Foreign Languages: English (First language), German (Limited Working Proficiency), French (Limited Working Proficiency), Spanish (Intermediate)

Academic: Algorithms, Distributed Systems, Data Stream Processing, Optimisation, Software Engineering, Big Data Systems

Computing: Linux, Git, CI/CD, AWS Cloud Computing, Docker, Developer Enablement, DevOps

Membership: Student member of IET, Member of Imperial Music Technology Society, Member and regular volunteer for Imperial Department of Computing Society (DoCSoc)

References

Available upon request