

AIMAN IMTIAZ

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EDUCATION

Yale-NUS College

Singapore

Bachelor of Science in Mathematical, Computational and Statistical Sciences

Jul. 2017 – May 2022

- Relevant Coursework: Programming Language Design and Implementation, Software Engineering & Object-Oriented Programming, International Relations, Arabic, Programming for Data Science, Data Analysis and Visualisation in R, Functional Programming and Proving, Data Structures and Algorithms, Parallel Concurrent and Distributed Programming
- Yale-NUS Study Award, Yale-NUS Summer Language Scholarship

Universitat Pompeu Fabra

Spain

Study Abroad - Computer Engineering

Jan. 2020 – Aug. 2020

- Relevant Coursework: Cryptography and Security, Large-Scale Distributed Systems, Image Processing, Information Theory and Coding, Blockchain Technologies

TECHNICAL SKILLS

Languages: OCaml, Haskell, Coq, Java, Scala, R, Python, SQL, JavaScript, HTML/CSS, MATLAB, L^AT_EX

Developer Tools: Emacs, Git, TravisCI, AWS, Apache Spark

EXPERIENCE

Software Development Intern

May 2021 – Aug. 2021

LUCY

Singapore

- Built integration points including SSO between an ERP and Lucy mobile application using AWS Amplify, AWS Lambda, AWS Cognito and Amazon Gateway to provide seamless accounting and financial services to Lucy users.

IT Support Student Associate

Sep. 2017 – Dec. 2020

Yale-NUS College

Singapore

- Resolved an average of 200 inbound call/email/walk-in inquiries per semester by staff, students and faculty pertaining to network issues, software troubleshooting, data analysis and hardware support.

Peer Tutor

Aug. 2018 – Dec. 2020

Centre of Teaching and Learning, Yale-NUS College

Singapore

- Organised bi-weekly open sessions, held office hours and one-on-one appointments for four semesters to provide tutoring, problem set instructions and IDE and L^AT_EX assistance to students enrolled in YSC1212 Introduction to Computer Science and YSC2209 Proof.

RELEVANT PROJECTS

Oat Compiler | *Emacs, OCaml, X86 Assembly, LLVM*

- Implemented a complete compiler including back-end and front-end compiler components for Oat, a simple imperative language which has boolean, int, string, array, struct and function pointer types as well as nullable references, in OCaml with LLVM as intermediate representation complete with the lexer, parser and type-checker.
- Programmed a version of LLVM IR compiler and an x86 Assembler including simulator, linker and adder for backend of the compilation pipeline to replace Clang.

A Watchman in the Dark | *Emacs, OCaml*

- Discovered and implemented a solution for the watchman route problem in OCaml by treating rectangular sections of the polygon room as nodes of a linked graph and using depth first traversal to build a path to sweep the room.
- Built a video game using **graphics** package of OCaml to maneuver the watchman using the keyboard to be able to test and observe the computed path.

WhereIsMyMoney? | *Java, Maven, PHP, TravisCI, Git*

- Developed an android application in Java (tested using TravisCI) to allow users to manage and categorize personal expenses to keep track of their budget against custom spending limits with the help of graphs and pie charts.
- Maintained users' transaction history stored in the application using PHP which takes the data as JSON objects and stores it on a MySQL database.