# Pav Sidhu

# **Education**

# University of Birmingham

2017 - 2021

- · BSc Computer Science with Year in Industry
- · I achieved a 1st during my first year

#### First Year:

- · Software Workshop: built applications in Java using best practices
- Functional programming: learned how to build efficient programs using OCaml
- Introduction to AI: neural networks, machine learning, probabilistic AI, searching algorithms and reasoning
- Other modules include: Data Structures and Algorithms, Software Engineering, Language & Logic and Applied Psychology

#### **Second Year:**

- Natural Language Processing: learned tagging, semantics and pragmatics
- Computer Vision: taught how to process 2D images with MATLAB including edge detection and facial/object recognition
- Computer Security: I will learn about threats/solutions on the web and in apps
- C / C++: I will learn how to write advanced programs using C and C++
- Other modules include: Professional Computing, Reasoning and a future Team Project

### Stanwell School (A Level)

2015 - 2017

2010 - 2015

- A\* Computer Science A Mathematics
- A Welsh Baccalaureate B Physics
- Top 10 WJEC Computer Science, UK
- Stanwell Computer Science Award 2017

### Westbourne School (GCSE)

Achieved 5 A\*s. 5 As and 1 B

Bronze Duke of Edinburgh award

# **Technical Skills**

#### Languages

- Javascript / Typescript
  - React / React-Native
  - Redux / MobX
  - Node.js / Express
  - REST / GraphQL
  - Electron
- Python
- Java
- C/C++
- Assembly (X86, MIPS)

#### **Cloud Services**

- Amazon Web Services
  - EC2
  - RDS
  - S3
  - AppSync
- Firebase / Netlify

#### Design

- Sketch / Adobe XD
- Adobe Illustrator

#### **Databases**

- SQLite
- MySQL / MariaDB
- PostgreSQL
- MongoDB

#### **Tools**

- Git
- Docker
- Elasticsearch
- · Cloudflare

# **Experience**

We Build Bots 2018 - Present

- Built a Facebook Messenger bot for Bacardi using TypeScript and MongoDB
- Worked on a serverless natural language processing knowledge base in Python
- Created a front-end interface for the knowledge base with React, Redux and Express
- Learned the importance of company culture and being flexible in a startup environment

# Carphone Warehouse

2016

- · Worked in a 4-6 sized team as a customer consultant
- · Gained insight in the importance of empathy and understanding towards customers
- · Learned how to coordinate tasks with my team

Freelance Work 2014 - Present

- Last worked with a client on a desktop app using Electron, React and MobX
- · Completed UI design work with several other clients

# **Code Club Volunteering**

2016 - 2017

- · I taught primary school children how to code with Python, Scratch and Raspberry Pis
- I learned how to explain difficult concepts and have patience with others

# **Projects**

# Feeling (Android App)

2018

- Currently building a smart mood tracking app using natural language processing techniques to understand mood patterns
- A small team are building the app using Java, TypeScript and GraphQL for the backend and AWS for hosting the server and data storage

# DayNote (React Native App)

2017

- · An open source daily journaling app, built for an online competition ran by Google
- Built using React Native, Firebase and ES6
- · Learned time management and working under pressure

### Revisify (Web App)

2015 - 2017

- A self-developed exam revision website used by 3000+ students and teachers
- Used Python with Flask, MySQL and JQuery, hosted on an AWS
- · Learned the importance of readable, scalable and maintainable code.
- · I also managed the marketing and finance

# **Interests**

- · I enjoy powerlifting and general health
- I play badminton weekly
- · I love to learn and practice UI design