Shiv Godhia

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Education

Gonville & Caius College, University of Cambridge — Cambridge, United Kingdom
BA (Hons) in Computer Science — 2018 – 2021

- **Third Year**, studying Information Theory, Communications Systems, Computer Vision, Machine Learning and Bayesian Inference, Quantum Computing, Advanced Algorithms, Natural Language Processing, Interaction with Machine Learning.
- **Second Year (85.25%)**, studied Data Science, Artificial Intelligence, Compilers, Concurrent & Distributed Systems, Computer Networking, Computer Architecture, Security, Formal Languages, Complexity Theory, Prolog, C / C++, Java.
- **First Year (2.1)**, studied Algorithms, Data Structures, Databases, OOP, Digital Electronics, UI / UX Design, Graphics, Machine Learning, Operating Systems, Security, Linear Algebra, Discrete Mathematics, Numerical Methods.

Skills

Java, Python (NumPy, SciPy, Pandas, Scikit-Learn, Pytorch, Keras, Flask), C/C++, JavaScript, SML, SQL, R, Git, Bash, Unix.

Work Experience

Software Development Engineer Intern, Amazon Alexa - Answer Generation (Cambridge, UK) — Jun 2020 – Sep 2020

- Worked in ANTLR to implement a strong type system for a custom internal domain-specific language (DSL) used for generating natural language in production systems (Alexa uses the output sentences to answer users' questions).
- Proposed backwards-compatible syntax change for optional type specification and implemented it by updating parser and lexer rules, internal data structures used for representing the DSL and the parser used to populate these representations.
- Worked in Java to implement DSL compiler validations for static type checking, also used Guava, Guice, Lombok, JUnit.

Software Development Engineer, Scope News Ltd (Cambridge, UK) — Aug 2019 – Dec 2019

- Lead developer of Controllable Abstractive Summariser for News Articles, from data collection till training.
- Worked in PyTorch to adapt MASS by Microsoft which utilizes Transformers for seq2seq deep learning.
- Modified feedforward neural network module to take in extra parameter as an input to control output length.

Data Science Intern, Data Prophet (Cape Town, South Africa) — Jul 2019 – Aug 2019

- Worked in Keras on VAE/CVAE architectures to optimise efficiency of Mercedes-Benz's C-Class production network.
- Compared and visualised performance of various autoencoder architectures with varied loss functions and metrics.

Software Engineer Intern, A*STAR Institute for Infocomm Research (Singapore) — Jan 2018 – Jun 2018

- Lead developer of website in JavaScript for labelling LIDAR data with 3D bounding boxes using ThreeJS, Flask, dat.GUI.
- Pre-processed image data (for measurements and de-noising) for prediction algorithm using OpenCV in Python.
- Wrote Bash scripts utilising Robot Operating System and tmux to automate data extraction, conversion and sampling of 100s of terabytes of LiDAR data and image data collected from LiDAR-mounted car every day for 3 months.

Projects

Prep.me – Smart Flashcard Revision Tool for Alexa, Hack Cambridge 2020 (Cambridge, UK) — Jan 2020

- Led team, developed frontend (Alexa intents) and assisted with implementation of flashcard review prioritisation algorithm.
- Team won first place in Amazon's Challenge (Teach Alexa to Teach the Basics) at this 24-hour hackathon.

TabWise – Web App for Coordinating on Splitting Receipts, Hack King's 6.0 (London, UK) — Dec 2019

- End-to-end solution to splitting receipts, from scanning and performing NLP on receipt to generating individualised payment links, built using NodeJS, GatsbyJS, ExpressJS, MongoDB, and the TabScanner API for analysing receipt.
- Team won the Capital One Challenge (Change Finance for Good) at this 24-hour hackathon.

HireYou – Website with Computer Vision, HackCambridge (Cambridge, UK) — Jan 2019

- Developed HireYou, a video interview practice website mimicking a HireVue session where users can review answers afterwards with smart feedback using Microsoft Azure's Face API to track, analyse and visualise emotions and eye contact.
- NodeJS/Express/MongoDB stack with Nunjucks for templating, Semantic UI for styling, and WebRTC to record the video.

Lumos – Cloud-Connected All-in-One Smart Home Accessory, HackOMania (Singapore) — Feb 2018

- Built IOT mechanical switch toggler interfacing with Raspberry Pi to turn existing home devices into smart ones.
- Emerged as team champions out of 18 teams in this 24-hour hackathon on the theme of Smart Homes.

Awards

Scholarship, Cambridge Commonwealth, European & International Trust — 2018 – 2021