Shiv Godhia

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EDUCATION

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

- **Third Year**, studying Bioinformatics, Information Theory, Communications Systems, Computer Vision, Machine Learning and Bayesian Inference, Quantum Computing, Advanced Algorithms, Natural Language Processing, Interaction with ML.
- **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 Team, Cambridge, UK)   Jun 2020 – Sep 2020
- Worked in ANTLR to implement a strong type system for a domain-specific language used for generating natural language
- Proposed backwards-compatible syntax change and implemented it by updating parser and lexer rules, internal data structures used for representing the language, and the parser used to populate these representations
- Implemented compiler validations for type checking in Java, making extensive use of Guava, Guice, Lombok and JUnit tests

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.
- Extensively documented Python code using DocStrings in the RestructuredText format.

Software Engineer Intern, A*STAR Institute for Infocomm Research (Singapore)   Jan 2018 – Jun 2018
- Lead developer of website 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