Shiv Godhia

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EDUCATION

Gonville & Caius College, University of Cambridge   Cambridge, United Kingdom
BA (Hons) in Computer Science   2018 – 2021
- Focused on: Information Theory, Computer Vision, Machine Learning and Bayesian Inference, Quantum Computing, Advanced Algorithms, NLP, Interaction with Machine Learning, Data Science, Artificial Intelligence, Advanced Java
- Dissertation: *Multimodal Hate Speech Detection in Internet Memes* – NLP and Computer Vision project

WORK EXPERIENCE

Software Engineer, Two Sigma Investments (London, UK)   Aug 2021 – Current
- Working in the AI Engineering team on a time-series forecasting library integrating machine learning techniques with Two Sigma's infrastructure.
- Collaborated with ML researchers to implement proprietary ML techniques in the library.
- Owned, designed and implemented solutions to use internally-developed and third-party models in production, including adding ONNX support, drive conversations with stakeholders to gather requirements.
- Implemented a one-click system to perform analysis on regularly retrained models, leveraging distributed compute.
- Reduced test times for an internal distributed compute library from over an hour to 10 minutes by implementing mocking and dependency injection, facilitating ownership transfer and reducing technical debt.

Technologies used: Python, ONNX, Pandas, Numpy, PyTorch, Spark

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.

Technologies used: Java, Guava, Guice, Lombok, Junit, ANTLR

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.

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.

AWARDS

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