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 AI Engineering team which provides ML products and solutions to enable and simplify alpha research.
- Key contributor to the team's time-series forecasting library with 150+ monthly active users, which integrates machine learning techniques (both internally-developed and third-party models) with Two Sigma's infrastructure.
- Key contributor to the forecasting library's integration with distributed compute frameworks. Reduced test times for an internal distributed compute framework by 85%, and implemented a new distributed compute framework with data locality-aware capabilities that speeds up common workflows by up to 3x.
- Co-own a library with an adjacent team for exporting fitted model parameters to production. Designed and implemented solutions to use the forecasting library's models in production, including driving conversations with stakeholders and senior engineers to gather requirements.
- Implemented a one-click system to perform analysis on regularly retrained models, leveraging distributed compute.
- Collaborated with ML researchers to implement proprietary ML techniques in the forecasting library.

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

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