Callum **Ke**

SOFTWARE ENGINEER II · AMAZON · UNIVERSITY OF BRISTOL (BSc FIRST CLASS HONOURS) · ENGLISH/CHINESE

☐ (+44)7722027026 | ✉ ckallumke@gmail.com | ⬚ ckallum | in callum-ke

Experience

Amazon - Prime Video
London, United Kingdom

SOFWARE DEVELOPMENT ENGINEER II
September 2021 - Present

- Core member in team owning the end-to-end life-cycle of customer entitlements in Prime Video Rentals and Purchase. Promoted to SDE-II in 18 months.
- Represented and lead our team in an multi-organisation initiative to launch Pay-per-view and TV Season's in Prime Video Global Marketplaces
- Designed and executed large scale(10TB) DynamoDB table migration of all production customers in Prime Video in steady-state, using a variety of AWS tooling such as AWS Step Functions, AWS Lambda, AWS Glue and more. Discovered and reported multiple bugs in public AWS code.
- Responsible for scaling our services to handle over 1.5 million TPS including some of the largest DynamoDB tables within Amazon.
- Interviewed, on-boarded and mentored multiple SDEs and interns

Amazon - Day One Intelligence
Edinburgh, United Kingdom

SOFWARE DEVELOPMENT ENGINEER INTERN
July 2020 - Oct 2020

- 3-Month internship as full stack-engineer within the Day One Intelligence team
- Developed a novel tool using AWS Lambda, Gateway, Typescript, Kotlin, DynamoDB to integrate a new product to help managers and engineers access internal talent management tooling into Slack.
- Presented tool during org-wide meeting resulting in it being adopted by multiple teams.

Wenxiang Educational Technology(https://wenxiangcn.com/)
Shanghai, China

TECHNOLOGY INTERN
Aug 2019 - Sep 2019

- Developed a Python script to scrape specified data off the internet which was then converted into JSON and imported into a database.
- Implemented RESTFUL web services in Java using Spring Boot and persistence frameworks.

Education

University of Bristol
Bristol, United Kingdom

BSc IN COMPUTER SCIENCE (FIRST CLASS HONOURS)
2018-2021

- **Thesis**: (Un)Fairness in Machine Learning: Achieving Fairness Through Non-Discriminating Goals
- **Extracurricular:** Computer Science Society Company Liaison, Brazilian-Jiu-Jitsu, Tennis, Track and Field.

George Watson's College
Edinburgh, United Kingdom

HIGH SCHOOL DIPLOMA
2012-2018

- **SQA:** Advanced Highers: A*A*A, Highers: A*A*A*A*A
- **Wright's Prize for Academic Excellence**
- **UKMT:** Senior Maths Challenge: Silver, Intermediate Maths Challenge: Gold

Projects

Covid-19 Twitter NLP Sentiment Analysis and Visualisation

PYTHON, HTML, GIT, AWS, HEROKU
2021

- Designed, planned and implemented a web-application as part of a three-person project to evaluate COVID-19 sentiment across the constituents of the UK over a two-year period.
- Used a custom-built wrapper of the Twitter API, UK government API's and news-outlet API's to scrape tweets, geographic data and related news-events during COVID-19 then used to map to 'sentiment' using various NLP techniques(VADER/LSTM/TextBlob).
- Used various data-collection, cleaning, analysis and plotting methods to present key variables and correlations in features within our data.

All-in-One Twitter Library

TWEEPY, PYTHON
2020

- Implemented a 'all-in-one' Twitter library that wraps the Tweepy API.
- Allows the user to tweet from the command line, automatically reply to tweets with a custom message, like and retweet tweets from specified users and follow/un-follow specified users directly from the command line.

Tic-Tac-Toe with Unbeatable AI

PYTHON, BASH

- Created a command-line, single player version of TicTacToe where the player playes against an unbeatable AI
- The AI uses a MiniMax game tree with Alpha-Beta pruning to decide its next move

Technical Skills

- **Languages**: Scala, Java, Python, TypeScript, SQL, Bash
- **Framework and Libraries**: Guice, Spark, JUnit, ScalaTest
- **Tooling**: AWS(DynamoDB, Lambda, Redshift, SQS, SNS, Glue, S3, CloudWatch), CI/CD, Git, Linux, Docker, Gradle