

Rakshit K Jha

+447898343887 | nmsrakshit@gmail.com | [LinkedIn](#) | [github/rkj26](#) | [The Boring Blog](#)

EDUCATION

BA & MEng in Information and Computer Engineering

Cambridge, UK | Oct 2018 - Jun 2022

UNIVERSITY OF CAMBRIDGE

Grade: 2.1 (69.92%) (Exams) (Ranked 86th out of 326)

Coursework: Algorithms and Data Structures, Statistical Signal Analysis, Inference, Probabilistic Machine Learning, Computational Statistics and Machine Learning, Deep Learning for structured data, Computer Vision, Practical Optimisation, Information and Coding Theory, 3D Graphics

Project: Worked on creating gaussian process factor analysis models for neural data to identify relation between behavioral decoding and neural spikes. Grade: Class I

WORK EXPERIENCE

META/FACEBOOK | SENIOR SOFTWARE ENGINEER

London, UK | Sep 2022- Present

- Currently, I work in the Account Security Team in Meta where the main goal is to increase the security of users by building and enabling security products, while also reducing the compromise rates. Most notable work I have led is the enablement of Passkeys (biometrics based auth) for Facebook Web for creation and login. I have also worked in the space of email compromise, building heuristics mapping to reduce account compromise coming from recycled domains, emails, integrating with Google RISC API etc.
- Before the Account Security, I worked on improving Appeals Infra and UI to unblock around \$10-13M / year of annualized incremental revenue. This also involved being compliant with EU DSA regulations.
- Prior to appeals, I was part of Authenticity as a junior engineer where I worked on regulatory verification requirements.
- Tech Stack: Hack(PHP), Python, Bloks, React, GraphQL, Relay.

FIFTHROW TECHNOLOGIES | SOFTWARE ENGINEER INTERN

London, UK | Jun 2021 – Sep 2021

- Migrating the landing page from Hugo to Next.js. Migrating from Sass to styled-components. Improves integration with the trading app written in React along with increasing overall Lighthouse metrics for performance and SEO to above 90 points.
- Developed HTTP REST endpoints for GDT (an ethereum based utility token) withdrawals using Typescript, Node.js, Express and tested using jest and a rust webserver to interface between internal infrastructure and databases.
- Developed monitoring system in Python for liquidity and spread of cryptocurrency perpetuals on the exchange.

FIFTHROW TECHNOLOGIES | SOFTWARE ENGINEER INTERN

London, UK | Jun 2020 – Sept 2020

- Automated the colo release process increasing the release rate to three times a week.
- Designed Python Client Library for WebSocket API for the exchange. Currently used by over 1000 users on the exchange.
- Scripted in kdb+/q + Python to generate reports for market makers on the exchange.
- Created a deep learning model deployment pipeline for predicting short term price movement using Python, Tensorflow serving API in Google Cloud.
- Implemented an OpenAI based Twitter bot that uses tweets of CoinDesk and CoinTelegraph to generate a new tweet.
- Created a QA bot using OpenAI API on Twitter for affiliates.

GLOBE RESEARCH | RESEARCHER

Cambridge, UK | Nov 2019 - May 2020

- First author on Deep Learning for Digital Asset Limit Order Books.
- Collaborated with Mattijs De Paepe and Samuel Holt to forecast short term price movements of cryptocurrencies using Temporal CNNs.
- Trained under a day and showed a performance of 0.73 F1-score on walk-forward testing.
- Performed data cleaning, pre-process, model research and model implementation in Tensorflow Keras, pandas.

CLUBS AND EXTRACURRICULARS

HEYWOOD SOCIETY | TECHNICAL DIRECTOR

Cambridge, UK | Mar 2019 - Mar 2020

- Supervised the technical aspects like lighting, sound, allocating funds for props and risk assessment (health and safety) in plays.
- Organised the fresher's play and the summer play for the college during the tenure.

PROJECTS

PERSONAL BLOG [↗](#)

TYPESCRIPT, NODE.JS, NEXT.JS, MARKDOWN, REACT, REDIS

- Blogging site with markdown support designed using Next.js. Styled using styled-components and Sass.
- Serverless rendering for optimising speeds and local caching using Redis.
- Content caters to mostly algorithms, data structures and leetcoding.

IMAGE COMPRESSION [↗](#)

PYTHON, PYTORCH, NUMPY

- Compressed grayscale image to size less than 5kB using a Lapped Bi-Orthogonal Transform and Huffman Coding and performed post processing of artefacts via convolutional network.
- Voted second highest in terms of visual quality in the final competition.

AGRIO [↗](#)

HEROKU, POST-GIS, POSTGRES SQL, DJANGO, PYTHON

- Collaborated with three students on an app for buying groceries for users and was the submission for Hex Cambridge 2021.
- Designed the back-end, created a working database on PostgreSQL with post-gis objects and hosted on Heroku. Based on MVVM architecture pattern.
- Exposed the API endpoints via Django-REST API framework for the React front-end to query the database.
- Voted highest project publicly amongst 92 projects in the competition.

INTEGRATED DESIGN PROJECT [↗](#)

C, ARDUINO

- Led a software team of three students for the coursework consisting of mechanical, software and electrical teams.
- Implemented the algorithm to move, detect and retrieve the object in the playfield using ultrasonic sensor and infrared sensors.
- Scored third highest number of points amongst 15 other groups in the competition.

SKILLS

Programming Languages: Python, Rust, SQL, Bash, C++, C, Java, MATLAB, kdb+/q

Web Development: JavaScript, TypeScript, HTML, CSS, Bootstrap, Sass, Tailwind

Python Libraries/Framework: PyTorch, Tensorflow, NumPy, SciPy, matplotlib, Seaborn, asyncio, Django, XGBoost, CatBoost, scikit-learn, py-spark, py-arrow

JS/TS Libraries/Framework: Node.js, web3.js, Express, Mongoose, Next, React, styled-components, MDX

Technology: Git, AWS, GCP, Docker, \LaTeX , MongoDB, MariaDB/MySQL

PUBLICATIONS

[*1] R. Jha, M. D. Paepe, S. Holt, J. West, and S. Ng. Deep learning for digital asset limit order books, 2020.