

## Luxi Liu

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## Experience

### Software Engineer

Amazon Ring

July 2022 –

Working in Ring Media, a backend team in the Video Platform organisation of Amazon Ring, responsible for the development and operations of key media services storing and sending device motion- and doorbell-activated snapshots and videos.

Leading development on a dynamic frequency snapshot capture feature for our devices which can be either battery- or wire-powered. This would reduce power usage when operating in battery mode, and improve battery efficiency by an estimated 0.9% per charge cycle for over 3.8 million devices.

Built a service integration transforming our architecture from event-based to time-based, enabling CCTV functionality for devices

**Technologies used:** Golang, Python, Java, Terraform, AWS, Redis, Jenkins, Grafana

### Software Engineer

Hook Co

Oct 2021 – May 2022

Worked on back-end team of 5 for a CRM data insights platform, integrating live data sources and developing features

Designer and lead developer on an Outreach integration feature, allowing customers to automatically send emails based on live product data. This feature is not available on any other platform.

Led development for a 'Notes' feature synchronising 7000 notes with external CRM platforms (Hubspot and Salesforce).

Built a predictive binary classification model for customers to target accounts at risk of churning and suggest useful actions.

**Technologies used:** Python, SQL, react JS, Flask, AWS, DataDog

### Data Consultant

Peru Consulting

Sept 2019 – Sept 2021

Projects included:

- **Data Architect at NHS Digital:** designed the metamodel in a pilot for Health Education England to demonstrate the value of a metadata pipeline, a project which has potential cost savings of £500mill per annum.
- **Data Analyst for commercial bank:** built a regression model in R using an internal database to verify the client's supplier pricing, where renegotiations decreased main supplier's price by 12%.

### Data Science Intern

artificial.io

June 2018 – September 2018

Built a gradient-boosted tree model to predict insurance risk, applying binary classification methods to housing data. Model had a 12% higher  $R^2$ -value than the previous model and was demoed to clients.

## Education

### Master's in Maths, First Class Honours

Imperial College London

September 2015 – July 2019

Specialising in Data Science and Statistics.

**Modules included:** Mathematical Computation, Credit Scoring and Quantitative Analysis, Advanced Statistical Modelling, Data Science, Survival Models in Actuarial Science, Mathematical Finance, Time Series, and Game Theory.

**Master's dissertation:** Modelled the causal effect of 20mph zones in London on traffic accidents by sourcing then transforming TfL data in R, using machine learning and regression to generate the propensity scores used to eliminate selection bias.

## Projects

[github.com/luxi-liu97/](https://github.com/luxi-liu97/)

Building a mobile puzzle game in Unity, to be released to Android and iOS in May 2023.

Exploratory data analysis on space mission data to generate insights and recommendations for a new (fictional) space agency.

Implemented a Scheme interpreter in Python with full Read-Eval-Print- Load functionality

## Technical Knowledge

Languages: Golang, Python, R, C#, Java, terraform, JavaScript, LaTeX

Technologies: AWS, Unity, Vue.js, MATLAB, SQL