RAPHAËL PICCOLIN

Backend Engineer

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SUMMARY

Backend developer skilled in web technologies, has a master's in scientific computing from UCL.
Loves to learn new skills and teach others through blog posts or in person.
Native French and English speaker. Can work in the UK, EU, and HK.

SKILLS

Languages: Typescript/Javascript, Golang, Python, Java

Technologies: SQL, Mongo, Elasticsearch, Git, Docker, Node, React, HTMX

PROJECTS

Golang & HTMX — **Beango Messenger** — beango.co.uk & github.com/raphael-p/beango-messenger
A browser-based messenger with an '80s hacker vibe. As part of this project, I have made open-source contributions to HTMX. I challenged myself by building my own libraries from scratch: HTTP routing, logging, testing, etc...

Python & Keras — **Optical Calibration with Deep Learning** — github.com/raphael-p/laparoscope-callibration-neural-net
Trains a convolutional neural network to calibrate a surgical camera with a single image. This is a proof-of-concept for my master's thesis, and part of the Smart Liver Project.

Python & Keras — **Automated fact checker** — github.com/raphael-p/fact-checking-lstm-model/
Implements a natural language LSTM model with GloVe embeddings using Wikipedia as a training set. The model verified 80.51% of claims accurately.

EXPERIENCE

since 2022 — **Fullstack Engineer** — **Ripjar**
- Developed our financial crime investigation platform, Labyrinth Investigations.
- Produced and delivered for migrating Elastic document collections of over 100GB.
- Contributed high-quality client-facing documentation.
- Communicated with clients to diagnose and resolves technical issues.
- Improved stability, for example by reaching a test coverage 90%+.

`Typescript  /  Node  /  React  /  Elasticsearch  /  Mongo`

2021 – 2022 — **Backend Engineer** — **KidsLoop**
- Worked in team for the back-end service which manages user accounts.
- Reduced CI pipeline build time by 50% by optimising database requests;
- Implemented data-loading which boosted query performance by ~43%.
- Synchronised database schemas across 4 countries and fixed database race-conditions.
- Lead redesign of 50% of request handlers in the service, which improved development speed & security.

`Typescript  /  Node  /  GraphQL  /  Docker  /  Postgres`

2019 – 2021 — **Junior Software Engineer** — **psHEALTH**
- Created an authentication service with Java Spring which integrates with the NHS's APIs.
- Built an behaviour-driven testing service with Robot Framework on Python.
- Trained 3 colleagues through demo sessions and pair programming.
- Manage stability and deployments of a multi-tenant production environment.

`Java  /  MS-SQL  /  Robot Framework  /  Python  /  RabbitMQ`

EDUCATION

2018 - 2019 — **Master of Science** in **Scientific Computing** with Distinction — **University College London**
Core subjects: machine learning (deep neural networks and natural language processing), numerical methods & optimisation for computing, high-performance computing. Thesis in computer vision.

`Python  /  C++`

2015 - 2018 — **Bachelor of Science** in **Physics** with First Class Honours — **University College London**

`Python  /  Java`