Roger Milroy

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PROFESSIONAL EXPERIENCE

Seclea   **London, UK**
Co-founder and Chief Product Officer   *2019 – Present*
- Led the technical communication during fundraising. Successfully raised 18 months of runway for MVP development.
- Identified key requirements from pilot partners and potential clients. Assessed and prioritized them for implementation.
- Directed the product design, defined the core workflows, interfaces and capabilities that the product provides.

Senior Software Engineer   *2019 - Present*
- Architected and developed the Python client for Seclea Platform to record models and datasets as part of Data Science workflows that integrate with scikit-learn, tensorflow and pandas. Deployed onto pip and conda-forge.
- Backend: Built the asynchronous execution of compute intensive analyses using docker, celery and redis.
- Backend: Architected a flexible and extensible common core analysis pipeline, dealing with heterogeneous requirements across pipelines, models and endpoints.
- DevOps: Deployed platform with docker-compose and several services including django container, celery async execution container, redis, postgres, nginx and certbot. Created and optimized deployment pipelines for fully automated CI and minimal interaction deployments.
- Reviewed 70% of all org PRs ensuring correct functionality and catching issues.

Data Science Lead   *2019 – Present*
- Supervised and guided the development of 4 ML projects, using a variety of ML techniques including GBMs and Siamese Neural Networks, working with diverse datasets across varied domains needing significant data engineering. Used pytorch, tensorflow, scikit-learn
- Led the integration of AI explainability methods, visualization, bias and fairness metrics as well as the development of new methods
- Led a practical tutorial on Responsible ML application development for 30 Masters students at University of Aberdeen in a hybrid in-person and remote format
- Mentored junior team members to improve knowledge and skills

Previous Experience
- *Royal Holloway, University of London: Researcher (2019)*
- *RGV Aviation: Aircraft Maintenance Engineer (2012 -2016)*

PROJECT EXPERIENCE

Enhanced Navigation in GPS Denied Environments   **London, UK**
Final Year Project   *2019 – 2020*
- Researched into the application of a new Machine Learning technique from Generative and Discriminative Models for Hybrid Inference by Satorras et al. integrating Deep Learning with mathematical models.
- Evaluated its potential for improving state estimation in robotics, specifically for autonomous drones. Used pytorch, Graph Neural Networks, ROS, C++
- Published in IEEE conference (DASC 2020): Where's WALL-E? A comparison of the Extended Kalman Filter and Hybrid Inference for pose estimation in MAVs

EDUCATION

Royal Holloway, University of London   **London, UK**
BSc in Computer Science (Artificial Intelligence) - First Class
- Awards: Department Best Finalist Prize, VP Education commendation.

University of California, San Diego   **San Diego, CA**
Exchange Program - GPA: 3.84
- Awards: Provost Honors List every Quarter

SKILLS & INTERESTS

Skills:
- *Languages*: Python | Java | C++ | TypeScript | SQL | HTML | CSS | LaTeX | Scala | bash
- *Frameworks*: PyTorch | Tensorflow | numpy | pandas | sklearn | django | FastAPI | React | REST | ROS | Arduino | OpenCV
- *Systems/Tools*: Linux | git | github actions | Docker/compose | Jupyter | AWS | CMake | Figma | Eagle (PCB design)

Interests: Rock Climbing, Scuba Diving, Surfing, Martial Arts