Ryan Pégoud

Location: Montpellier, France
Citizenship: French, German

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Passionate and self-driven Machine Learning Engineer with industry and academic experience in RL and NLP. Committed to teaching and openly sharing my projects.

Education

MSc Computational Statistics and ML — **UCL**, London, England 09/2024 – 09/2025

Yearly average: **78.5%, Distinction**
Thesis title: Neural Memory Augmentation for In-Context Learning in Agentic Language Models
Supervisor: Tim Rocktäschel

Independent Research (Gap Year) — Montpellier, France 08/2023 – 08/2024

- Designed and lectured an **MSc-level NLP module** at former engineering school
- Research contributions include:
  - **First-author** paper at **ICML 2024** Workshop
  - **Second-author** paper at **RLC 2025** Conference
- Authored 7 technical articles on **Towards Data Science** (**30k+ total reads**)

MEng in Computer Engineering — **EPF**, Montpellier, France 03/2019 – 07/2023

Graduated with **First-Class Honours** *(Mention Très Bien)*

- Ranked 9/149 **(top 6%)**
- MEng Average: 16.92/20 **(84.6%)** *Achieved despite challenging personal circumstances (bereavement)*

Academic Appointments

Lecturer & Pedagogical Tutor — **EPF**, Montpellier, France 09/2023 – 06/2024

- **As Lecturer (09/2023 – 01/2024):** Designed and delivered a new **MSc-level NLP module for 30 students**, creating the curriculum from scratch and managing all lectures, assignments, and exams.
- **As Tutor (01/2024 – 06/2024):** Mentored an MSc student through their thesis on **Retrieval-Augmented Generation** (RAG) for helicopter certification, in partnership with *Airbus Helicopter*.

Professional Experience

Data Scientist (MEng Thesis) — **BMW Group**, Munich, Germany 02/2023 – 07/2023

*Thesis Grade: **20/20 (100%)***

- Engineered a deterministic anomaly detection system based on vehicle hardware features to replace a biased, low-performing LightGBM model.
- This new approach enabled **real-time**, **verifiable**, and **explainable** anomaly detection, shifting from unreliable predictions to quantifiable insights.
- Deployed the solution **at the scale of BMW's fleet** using **PySpark** and **AWS**.
- Separately, developed a NeuralProphet model for fleet connectivity forecasting, achieving **92% accuracy with a 3-day horizon**.
- Built end-to-end data solutions, including ETL pipelines and dashboards for stakeholder reporting.

Data Scientist (BEng Thesis & Student Job) — **CEWE**, Germany & France (Remote) 07/2021 – 07/2022

Thesis Grade: ***17.7/20 (88.5%)***

- **BEng Thesis (07/2021 – 01/2022):**
  - Developed a multilingual **BERT** model for text classification achieving a **90% F1-score** across **14 classes** and **3 languages**.
  - Built an **active learning platform** with Dash and **implemented temperature scaling** to ensure the model's long-term sustainability and calibration.
- **Student Job (06/2022 – 07/2022):** Shipped two projects: an **aspect-based sentiment analysis pipeline** with BERT and a **time series model** using NeuralProphet to forecast customer service traffic.

Publications

Conference Papers

1. Ryan Sullivan, **Ryan Pégoud**, Ameen Ur Rehman, Xinchen Yang, Junyun Huang, Aayush Verma, Nistha Mitra, John P Dickerson. **"Syllabus: Portable Curricula for Reinforcement Learning Agents"**, **Outstanding Paper Award** on Tooling, Environments, and Evaluation for RL. *Reinforcement Learning Conference* (**RLC**), 2025, Alberta, Canada.

Workshop Publications with Peer-review

1. **Ryan Pégoud**, Thibault Lahire. **Better Gradient Steps for Deep On-Policy Reinforcement Learning**"". *Aligning Reinforcement Learning Experimentalists and Theorists Workshop at the International Conference on Machine Learning (**ICML**)*, 2024. Vienna, Austria.

Online Publications with Editorial Review

- Authored **7 technical articles** on *Towards Data Science*.
- Topics: RL, NLP, JAX, Transformers, Triton, GPU programming
- My articles have accumulated over **30k+ reads** and received multiple **Editor's Picks**.

Open-Source contributions

Syllabus: Synchronized Curriculum Learning for RL Agents

- Contributed **multi-agent learning curricula** in **PyTorch** for our RLC 2025 paper.

Stoix: Distributed Single-Agent Reinforcement Learning in JAX

- Contributed an implementation of **Rainbow DQN** *(Hessel et al., 2017)* to this popular **JAX**-based RL library.

Technical Skills

- **Languages:** Python, Flutter
- **ML Frameworks:** JAX, PyTorch, Triton, Transformers, Scikit-learn, LightGBM
- **Data & ML Libraries:** NumPy, SciPy, Pandas, PySpark, Hugging Face, Weights & Biases, Plotly
- **DevOps & Cloud:** Git, Docker, AWS

Languages and Hobbies

Languages

French: Native
English: Fluent (MSc from UCL)
German: Proficient
Spanish: Conversational

Hobbies

Music: Guitar (8 years); solo and band concert experience.
Rollerblading: Racing & freestyle (8 years); competed in FISE World.
Calisthenics: 7 years of practice.
Thai Boxing: 2 years of practice.