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Natalie Grefenstette, PhD

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PROFESSIONAL EXPERIENCE

Data scientist and product developer   **August 2023 — ongoing**
Qatium   *Remote*
- Spearheaded the machine learning (ML) strategy according to business goals by proactively discussing needs with stakeholders
- Constructed an ML pipeline (from data to deployment and monitoring) to allow categorization of network properties with unknown labels, improving app experience for new customers (data processing, multi-label categorization, Tensorflow, SQL)
- Led an ML project to uncover underlying patterns in customer data to enhance predictive hydraulic models (time series analysis)
- Developed web applications to address complex challenges in water infrastructure management (Typescript, React)

AI resident   **February 2023 — November 2023**
Apziva   *Remote*
- Generated a state-of-the-art ML pipeline using Natural Language Processing (Seaborn, Keras) and Learn-to-Rank algorithms to reduce the cost of talent acquisition by streamlining the screening process and increasing efficiency
- Created an advanced neural network model (CNN) to assist visually impaired individuals with document scanning independently
- Forecasted financial movements using the latest algorithms including LSTM, ARIMA and Prophet in order to maximize profit

Computational researcher   **June 2019 — August 2022**
Santa Fe Institute   *Santa Fe, NM, USA*
- Orchestrated the construction of computational models (Gillespie algorithms, stochastic modelling, optimization) for $7 million NASA project to analyze space data for signs of life
- Devised ML approaches to look for general polymeric structures (abstracted from known biopolymers) in spectrometry data
- Supervised the writing of two chapters in a collaborative effort to summarize key literature in astrobiology in one collection
- Executed independent peer review of NASA grants to select NASA's next early-career researchers developing innovative project
- Organized a workshop for 30+ emerging scholars (budget: $67k), along with conference sessions
- Published 10 papers in high-impact journals, and presented at key conferences and universities

CEO and Co-founder   **November 2017 — June 2020**
Encelo laboratories   *London, UK*
- Designed the business-case for non-invasively sourcing patient specific cells for biotechnological applications, leading the business to secure over £150k in private equity and over £40k in grant funding
- Obtained 7 letters of intent from potential clients worth over £50k annually combined, and letters of support from top pharmaceutical and biotech companies
- Initiated a patent process protecting our innovation (published in 2023)

Entrepreneur in residence   **June 2017 — October 2017**
Deep Science Ventures   *London, UK*
- Top 3% of candidates selected for the VC-backed program to solve difficult technical challenges in multidisciplinary projects while developing a deep understanding of biotech ecosystems (including health, energy, and climate)
- Built business-cases from a position of fulfilling a need and solving a problem observed in the world while disrupting the established system

EDUCATION

Professional development, *Terra.do Software Stacks in Climate Tech*   **2024**

Certificate, *IBM Data Science Certificate*   **2023**

PhD Chemistry, *University College London*   **2017**
BSc Biochemistry, *University College London* - Graduated with honors in the top 5% (Dean's list) **2012**

SKILLS

Tools   Python, Pandas, SQL, Numpy, NLP, CNN, Sci-kit, Matplotlib, Seaborn, TensorFlow, Keras, Typescript
Languages   English (fluent), French (fluent), Spanish (intermediate)

AWARDS AND FEATURES

Peer reviewer for high impact scientific journals (*Nature Ecology and Evolution, Journal of Molecular Evolution, Life*)   2020 — 2023
Featured in The Economist and the '50 inspirational women in STEMM' book   2022
Orchestrated a successful Kickstarter campaign, raising over £4000   2018
Awarded 'best talk' at a conference   2018