

PROFESSIONAL EXPERIENCE

Software developer with machine learning specialization

August 2023 — ongoing
remote

Qatium

- Developed a machine learning (ML) approach to predict tank emptying and improve customer experience for critical warnings
- Led a ML project to uncover underlying patterns in customer data to enhance predictive hydraulic models (time series analysis, data processing)
- Developed web applications optimizing water management by leveraging browser technologies and algorithms to address complex challenges in water infrastructure management (pair-programming, test-driven development, typescript, React, CSS, HTML).

AI resident

February 2023 — ongoing
remote

Apziva

- Led commercial models (Python, Pandas, Sci-kit, Matplotlib) to identify the root cause of customer dissatisfaction and devised a strategic plan to extend the customer lifecycle, resulting in improved customer retention
- Constructed a deep learning system (Tensorflow) to identify prospective customers from a highly imbalanced dataset, providing the sales team with valuable insights into critical client characteristics, increasing the chances of successful sales
- Developed a state-of-the-art ML pipeline using natural language processing (NLP, 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 state of the art algorithms including LSTM, ARIMA and Prophet in order to maximize profit

Computational researcher

June 2019 — August 2022
Santa Fe, NM, USA

Santa Fe Institute

- Led the construction of computational models (Gillespie algorithms, stochastic modelling) for multi-million dollar NASA project to analyze space data for signs of life
- Devised ML approaches to look for general polymeric structures (abstracted from RNA/DNA/proteins) in spectrometry data
- Spearheaded large scale international collaborative efforts with world leading universities resulting in 2 published chapters
- Executed independent peer review of NASA grants
- Organized a successful workshop for 30+ emerging scholars (budget: \$67.1k), along with conference sessions at top conferences
- Published 8 papers in top journals, and was invited to talk and present at key conferences, as well as world leading universities

CEO and co-founder

November 2017 — June 2020
London, UK

Encelo laboratories

- Developed the business-case for non-invasively sourcing patient specific cells for biotechnological applications, and managed the financial budget for prototype and business development
- Top 3% of companies selected for the Rebelbio accelerator (VC-backed)
- Obtained 7 letters of intent from potential clients worth over £50k annually combined, and letters of support from top pharmaceutical and biotech companies
- Hired and led a team to develop applications and client leads, leading the business to secure over £150k in private equity

EDUCATION

PhD, Chemistry, University College London - Studied the prebiotic synthesis of RNA precursors

2017

- Specialized in nucleophilic aqueous phosphorylation and systems chemistry
- Discovered a generational node in the network of prebiotic chemistry that links the syntheses of amino acids with nucleotides
- Received an award for best talk at a conference and published my work in several key journals

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

2012

SOFT SKILLS AND FEATURES

Languages English (fluent), French (fluent), Spanish (intermediate)
Key features Featured in [The Economist](#) and the '50 inspirational women in STEMM' book

NOTABLE ACTIVITIES

IBM Data Science Certificate 2023
External conference organizing committee, AbGradCon 2020 — 2021
Peer reviewer for top journals in the field 2020 — present
Undergraduate Complexity Research mentor 2021
Guest lecture at Art of Inquiry, an interactive online school for ages 10-14 2021
Orchestrated a successful Kickstarter campaign, raising +£4000 to record an album 2018
Other media appearances: [MIT Technology Review DE](#), [SFI news](#), [Astrobiology NASA news](#), [Blue Marble Space Institute of Science](#),
[Smithsonian magazine](#), [Biomusings](#)
Podcasts: [Alien Crash Site](#), [Complexity by the Santa Fe Institute](#), [Learning with Lowell](#)