Dr. Filippo Broggini

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GenAI, Python, Cloud, Open source

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I am a highly motivated and experienced technology leader with a proven track record of success in delivering customer-facing challenging projects. I have a passion for transforming complex projects using core principles of insights generation into simple stories that stakeholders can understand and act on. I am a team leader who is capable of motivating and inspiring others. As a problem solver and fast learner with the ambition of continuously pushing the status quo without compromising service or quality, I am looking to join an impactful organization that is committed to using technology to solve real-world problems and to providing world class services.

Work Experience

Senior Solutions Architect - NVIDIA, Zürich, Switzerland   December 2024 - Present

- **Solutions Architect - Energy EMEA**
  - Provide SA support for various companies in the energy sector based in EMEA
  - Key skills: Generative AI, Python, accelerated computing

Senior Solutions Engineer - Squirro AG, Zürich, Switzerland   May 2020 - October 2024

Squirro is a leading insights and search engine that helps enterprises turn data into actionable insights

- **Currently leading the customer-facing part of Squirro's Generative AI initiative (SquirroGPT)**
  - Initial discussions with prospects (resulted in 10 sales-qualified leads in Q2/Q3), use cases evaluation, prompt engineering, integration with Squirro's existing enterprise search solution.
  - Key skills: NLP/LLM, Generative AI, Python, pre-sales
- **Managed the design, planning, and implementation of 15 complex and challenging customer-facing projects, deploying custom Squirro-based solutions on time and within budget**
  - Either alone or in a team of 2 to 5 people
  - Industries such as finance/banking (e.g., major European central banks and a Zurich-based neo bank), pharmaceutical, chemical, marketing, reinsurance, consumer goods, energy, and sales
  - Ingestion of external data sources, design of infrastructure, processing pipelines, automation, search relevancy, fine-tuning of NLP models for text classification, recommender systems, UI design, web APIs design, project management
  - Key skills: Python, NLP, GCP, recommender systems, web APIs, Ansible, Terraform
- **Collaborated with customers and end-users at all stages of the project lifecycle, from pre-sales to support, to ensure that solutions met their needs and exceeded expectations**
  - Customer satisfaction of 93%
- **Successfully applied NLP techniques to unstructured enterprise data to extract customer insights**
  - Sentiment analysis, topic modeling, document similarity, semantic search
  - Resulted in more than 10 sales-qualified leads (SQLs) and the creation of a new product
  - Key skills: Python, NLP (spaCy, HuggingFace ecosystem)
- **Built data connectors for premium data sources and proprietary data sources and integrated the extracted data into Squirro or other existing platforms**
  - Morningstar, LexisNexis, Refinitiv, PitchBook, Atlassian, AEM, CRM (e.g., Salesforce), REST-API-based
- **Created the first public documentation for Squirro (Sphinx, JSDoc)**

Software Engineer - ETH Zürich, Zürich, Switzerland   January 2019 - March 2020

- Lead the design, development, and optimization of a seismic wave propagation modeling software (C++, Python) which resulted in the awarding of multiple grants (500K node hours) from the Swiss National Supercomputing Centre (CSCS)

Senior Scientist - ETH Zürich, Zürich, Switzerland   January 2017 - December 2018
Postdoc - ETH Zürich, Zürich, Switzerland   September 2013 - December 2016

- Developed new applications to tackle long-standing problems in subsurface imaging and published the findings in 10+ peer-reviewed journals and conference proceedings
- Established scientific cooperation with international teams which resulted in 35+ peer-reviewed publications and contributed to a successful EU-funded project involving 15 academic and industry partners (WAVES ITN project) with a budget of €3.200.000
- Established a PhD project funded by a multinational energy company with a budget of €300.000
- Supervised a team of PhD (5) and MSc students (6), and co-authored 10 peer-reviewed publications

Geophysicist Intern - Schlumberger Cambridge Research, Cambridge, UK   Summers 2010 & 2011

Scientific Software Developer - Università di Pisa, Pisa, Italy   October 2007 - July 2008

Open-source projects

- Open-source software advocate with active engagement in the [Software Underground](#) community
- Creator of [arxiv-insanity](#), a semantic search engine and generative AI tool for [arxiv.org](#)
- Initiator of [SwungHub](#), a computational platform based on JupyterHub and Dask (Kubernetes, Terraform)
- Former developer of [Madagascar](#), an open-source software package for multidimensional data analysis

Leadership and awards

- Founding and former [board member](#) of the [Software Underground](#) society (not-for-profit)
- Chairman of the [EAGE Young Professional](#) group (2014 to 2018) and member of the [EAGE Education Committee](#): pushed for the introduction of the first Data Science courses in the course catalog
- Co-organized two online conferences for Software Underground: [Transform 2020](#) and [Transform 2021](#)
- Won a prize at a [hackathon on machine learning and visualization](#) applying computer vision techniques (OpenCV) and developing a web application for exploring geoscience data (scikit-learn, Dash)
- Organized multiple successful workshops and hackathons on reproducible science, visualization, and machine learning attended by 50 participants each
- PhD Thesis: Winner of the Gustavo Sclocchi Theses Award presented by EAGE, Assomineraria, and SPE
- MSc Thesis: Awarded 110/110 cum laude

Education

PhD, Exploration Geophysics - Colorado School of Mines, CO, USA   August 2008 - May 2013
Exploration geophysics, data processing, high-performance computing (HPC), outreach

- Developed a novel and innovative geophysical method, [Marchenko focusing](#), now used and further investigated by many international research groups (TU Delft, Utrecht University, University of Edinburgh, KAUST, NTNU) and energy companies (Shell, Schlumberger, Petrobras, Equinor)

MSc, Exploration and Applied Geophysics - Università degli Studi di Milano, Italy   Sept 2004 - Sept 2007
Exploration geophysics, data processing

BSc, Telecommunications Engineering - Politecnico di Milano, Milan, Italy   Sept 2001 - August 2004
Signal processing, telecommunications network