FILIPPO FRANCHINI

Summary

I am a data scientist, software engineer and entrepreneur. I devise tools that help people to fill data gaps and make predictions, to automate and efficiently boost labour-intensive and time-consuming calculations, and to understand complex systems. I improved protocols and devised the first quiet multi-rotor acoustic drone to map sound sources from the air using only acoustic information.

I am currently searching for a position that allows me to apply and improve my coding skills as well as develop new methods and instruments using statistics, software engineering, machine learning and artificial intelligence.

💼 EXPERIENCE

Present | 2020

Co-supervisor in Signal Processing, Machine Learning & Artificial Intelligence
SUPSI DTI (Department of Innovative Technologies)　📍 Ticino, Switzerland

- MSc student co-supervision and expert at MSc thesis presentation.
- Drone noise cancelling using a mixed approach of Machine Learning, Artificial Intelligence and Signal Processing techniques (R, Matlab).

Present | 2014

Tutor, Demonstrator, Mentor and Consultant in Statistics
University of St Andrews, University of Essex, Tutorful Ltd.　📍 St Andrews & Colchester, UK

- Tutor and lead demonstrator in statistics, computer science, psychology and biology (R, Python, Matlab and SPSS).
- Tutor in statistics and GIS at CEED (Centre for Educational Enhancement and Development).
- 250+ hours taught in person and online.
- ILM level 3 Coaching and Mentoring certified mentor.

Present | 2017

Co-founder, Administrator & Data Analyst
EARFLY Sagl　📍 Ticino, Switzerland

- Flight board and drone noise analyst (R, Python, Matlab).
- Media, marketing and business management.
- Partnerships with sponsors and suppliers.
- Patent application.

2020 | 2011

Co-founder and Instructor
Guidare con Stile Sagl　📍 Ticino, Switzerland

- Organizing one-day courses on road security, law compliance, accident prevention, nutrition, and abuse of psychoactive substances.
- Facilitating group discussion on relevant road issues.
- Organizing meetings with other co-founders.

2016 | 2013

Data Scientist and Software Engineer
SUPSI Earth Science Institute　📍 Ticino, Switzerland

- Big multivariate time series analysis.
- Validating, cleaning and standardizing data for exploratory analysis and pattern identification.
- Statistical modelling and software development (Excel Visual Basic, R) to replace data gaps and make temporal predictions.

💲 FUNDING

Present | 2017

CREEM Scholarship
PhD award of £70'000 to cover tuition fees and living expenses for a period of 3.5 years.

2020 | 2019

National Geographic Standard Grant
Grant of $30'000 to fund the fieldwork and part of the technology development of my PhD.

2019

EPSRC Impact Acceleration Account
Grant of £2500 to finance part of the technology development of my PhD.

CONTACT

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- ✉ filippo.franchini@outlook.com
- in LinkedIn
- ⌘ GitHub
- ResearchGate
- Instagram

CODING SKILLS

- R
- Matlab
- Python
- Excel VBA
- C++
- Javascript
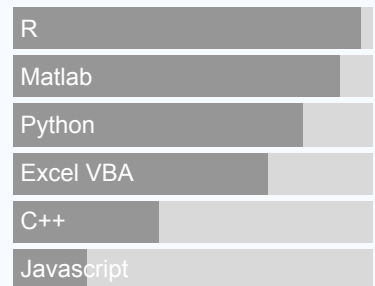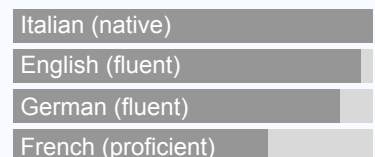
SOFTWARE

cv: (contributor) Creates awesome data-driven cv's. **ascr**: (contributor) Maps sound sources using fixed microphone arrays. **dshm**: (author) Fits two-stage density surface Hurdle models and automates labour-intensive GIS routines. **adas**: (author & private) Maps sound sources using moving microphone arrays.

LANGUAGES

- Italian (native)
- English (fluent)
- German (fluent)
- French (proficient)

🎓 EDUCATION

PhD Student in Statistics & Statistical Computing
Present | 2017

University of St Andrews, CREEM — 📍 Scotland, UK

- New R-implemented statistical methodology to locate and map sound source using moving microphone arrays.
- Analysis of drone noise and flight data (R, Python, Matlab)
- Joint collaboration with the industry for the design and manufacture of the first acoustic multirotor drone as well as for drone noise cancelling.
- Successful National Geographic Standard Grant and EPSRC IAA applications.
- Organization and logistic planning of one-month fieldwork in Laos with Association Anoulak.

MSc in Applied Statistics (Marine Mammal Science)
2017 | 2016

University of St Andrews — 📍 Scotland, UK

- New R-implemented methodology that automates labour-intensive and time-consuming GIS spatial calculations as well as constructs density surfaces based on model predictions.
- Software development and parallel computing.

MSc in Applied Statistics (Biogeoscience)
2015 | 2014

University of Essex — 📍 Essex, UK

- New protocols to improve the quantification of small quantities of gases using a gas chromatograph.
- Monte-Carlo simulation and sensitivity analysis to estimate the biogenic gas release from coral reefs worldwide.

BSc in Biology
2013 | 2010

ETH Zürich — 📍 Zürich, Switzerland

📰 PUBLICATIONS

2020 — **Habitat partitioning in sympatric delphinids around the Falkland Islands: predicting distributions based on a limited dataset.**

2017 — **Improving estimates of primary production in lakes: a test and a case study from a peri-alpine lake (Lake Lugano).**

2017 — **Protocols for the Quantification of Dimethyl Sulfide (DMS) and Other Volatile Organic Compounds in Aquatic Environments.**

2017 — **Quantification of dimethyl sulfide (DMS) production in the sea anemone Aiptasia sp. to simulate the sea-to-air flux from coral reefs.**

🏅 Prizes & Awards

Top 10 most influential people in Ticino (Switzerland), Ticinonews - 2019

EARFLY as top 10 best innovative start-ups, Boldbrain Start-Up Challenge - 2018

The Dean's List, University of St Andrews - 2017

The Marine Biology Prize, University of Essex - 2016

Élite-sports award, Swiss Federal Sport Office - 2009

💼 Additional Experience

Boldbrain Start-up Challenge, 90-days Accelerator including free coaching and workshops in Value Proposition, Finance, Pitching and Intellectual Property, September-December 2018

Swiss Army, Special Force Command, 2009

Interests

🏆 Competitive Gymnastics 2006-2014

🎵 Classic and electric guitar since 1997, 7 years at Classic Guitar School

🤿 Scuba Diving PADI Open Water Diver, Nitrox and Deep speciality.

🚤 Motorboat licence

🐾 Animal lover

📷 Wildlife photography

🧳 Travelling