

SebastienCampion

Senior Research Engineer

contact

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github.com/scampion
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languages

french mother tongue
english & spanish

skills

AI Architect, Proof Of
Concept, Scientific
Computing, Machine
Learning, Python, Linux
Git, Cython, Java, C,
C++, Javascript,
HTML5.

experience

2019 - now **PricewaterhouseCoopers** / Advisory 2700 employees Luxembourg, Luxembourg

Data AI Architect at Directorate-General for Taxation and Customs Union.

Design and implement a complete data science platform dedicated to large scale real-time analysis for European commission / Taxation and Customs Union Departement. Implement machine and deep learning projects for geocoding prediction and a large scale similarity search engine.

| Machine Learning | Container orchestration Kubernetes | Data Virtualization | Continuous Delivery |

2017 - 2019 **INRIA** / French Academic Research Institute 2500 employees Rennes, France

Research engineer in Cybersecurity.

Dealing with various topics like ransomware detection, malware analysis using machine learning techniques or cryptographic protocols.

- Contributing to scientific experimentations.
- Design infrastructures and softwares.
- Requirements analyse and bootstrap projects.
- Establishing roadmap.
- Supervising projects and team leading.
- Recruiting.

| Concolic | ANGR | Call graph | Double Ratchet | Diffie-Hellman |

Technical director for high security laboratory.

| DMZ Infra | Cisco ASA | Docker cluster | Jupyter | GPU |

2015-2017 **Mediego** / Startup Rennes, France

Co-Founder and CTO

The solution developed enables to compute efficient and fast recommendations for emailing based on the user's web navigation.

- Product manager.
- Pre-sales client analysis.
- Team leading.
- Proof of concept.
- Market study.
- Support.

| Machine Learning | ANN | Kafka | Cassandra | Mongo | Java |

2007-2015 **INRIA** / French Academic Research Institute 2500 employees

Rennes, France

Research engineer for efficient exploration and indexing in very large multimedia databases.

- Contributing to scientific experimentations
- Managing our platform for indexing multimedia contents
- Coarse-grain distributed computing
- Developing and improving scientific prototypes
- Elaborating corpora / ground-truth for experimentation's evaluations
- Publishing demo and online web services

| *Machine Learning* | *Large scale* | *ANN* | *CBIR* | *Computer Vision* | *NLP* | *Python* | *Redis* | *Scikit-Learn* |

Technical director for INRIA forge

| 14 000 users | 4 300 projects |

2002-2007 **Orange Labs** / France Telecom R&D 130 000 employees

Rennes, France

Junior Project Manager for TV/VOD metadata management networks.

- Project on metadata aggregation service for multimedia contents distributed on Orange's networks (IP, ADSL, Mobile)
- Mobile TV project: specification and development of an electronic service guide for mobile terminals through an experimentation handled to DVB-H (Digital Video Broadcasting standard).
- Development of TV/VOD portal access by Orange ADSL TV Set Top Boxes.

2001 **Thomson Grass Valley**

Rennes, France

Internship (3 months)

Development of a web monitoring tool which centralize logs generated by various MPEG2 audiovisual appliances (gateway, encoder, multiplexer, decoder, ...)

consulting & teaches

- Expert for the claiming of research tax credit (CIR) by the French Ministry of Higher Education and Research
- Expert trainer in software development for lawyers at IEEPI
<http://bit.ly/ieepi-scampion>
- Lesson on open source development and Research - Master degree Research
<http://scampion.github.io/devoss>
- Practical work for "Multimedia Machine Learning Tutorials" - Master degree
<https://github.com/scampion/multimedia-machine-learning-tutorials>

education

1999-2002 **Master's degree in Engineering** of Computer Science and Telecommunications

ESIR, University of Rennes 1, France

Specialization in language and computer system.

1997-1999 **DEUG (two-year university degree)** Physics and Chemistry

University of Rouen,

France

Specialization in computer science

publications

- Aug 2020 **Multi-Device for Signal** Applied Cryptography and Network Security, Roma, Italy
Keywords: cryptography, secure instant messaging, ratchet, multi-device
- Sep 2014 **Audio thumbnails for spoken content without transcription based on a maximum motif coverage criterion** Annual Conference of the International Speech Communication Association, , Singapour, Singapore.
Keywords: : spoken content processing, audio mining, motif discovery, summarization, thumbnailing.
- Aug 2013 **MODIS: an audio motif discovery software. Show and Tell** Interspeech 2013, Lyon, France.
Keywords: : word discovery software, pattern matching, unsupervised learning, dynamic programming .
- Oct 2012 **Efficient Mining of Repetitions in Large-Scale TV Streams with Product Quantization Hashing.** ECCV, Firenze, Italy.
Keywords: : large scale, product quantization hashing .
- Jun 2012 **Texmix: an automatically generated news navigation portal**ICMR - ACM, Hong-Kong, China.
Keywords: : HTML5, hypervideo, topic segmentation, speech to text, named entities, similar images, dynamic resume, geotagging.
- Oct 2010 **AVSST- an Automatic Video Stream Structuring Tool** NEM Summit, Barcelona, Spain
Keywords: TV Stream, Indexing, Structuring, Repetition detection, Classification, EPG, metadata, DTW
- April 2007 **Service Platform for Converged Interactive Broadband Broadcast and Cellular Wireless** IEEE Transactions on Broadcasting
Keywords: : Multimedia, Digital video broadcasting, Multimedia systems, Cellular networks, Content management.

patents

- Sep 2004 **Procédé d'enregistrement thématique de contenus numériques à diffusion programmée** fr 0300882
- Sep 2004 **Procédé d'enregistrement, avec mise à jour, de contenus numériques à diffusion programmée** fr 0300883