

Semion Sidorenko

Chemin du Frêne 7

CH-1004 Lausanne

+41 79 881 07 35

semion.sidorenko@gmail.com

github.com/ssidorenko

Profile

Experienced machine learning and software engineer with over 15 years of Python expertise, strong DevOps capabilities, and a deep understanding of data science, machine learning, and data engineering. Currently working as a PhD student at the Laboratory for the History of Science and Technology, Ecole Polytechnique Fédérale de Lausanne, combining ethnography and critical data studies in order to study data practices in public administrations.

Skills

Data/AI

Data Science/ML	Comprehensive expertise in machine learning principles, data processing, and data visualization. Proficient in Pandas, sklearn, Jupyter, and Matplotlib.
Data Engineering	In-depth knowledge of PostgreSQL, ETL pipelines, Airflow, and Data Warehouse architecture.
Deep Learning	Strong theoretical foundation and practical experience, particularly with Convolutional Neural Networks for image recognition and generation. Skilled in PyTorch and experienced in translating research models into production-ready solutions. Experience with training Large Language Models.

Software Engineering

Python	Advanced proficiency in Python, with extensive experience using Django and Flask frameworks.
Javascript	Strong background in JavaScript, including Vue.js, d3.js, and jQuery.
DevOps / CI	Hands-on experience implementing DevOps best practices and CI pipelines using tools such as Docker, Terraform, GitHub Actions, and Jenkins.
Automated Testing	Extensive experience with automated testing frameworks including PyUnit, Pytest, Selenium, and Rspec.
Other tools & technologies	Proficient in Git, GNU/Linux administration, C, HTML, CSS, Scala, R, Java, Terraform, Ansible, S3, EC2, Ruby, and Rails.

Other expertise

Social Sciences	Proficient in both quantitative (survey design, statistical analysis) and qualitative (ethnography, interviews) research methods. Solid understanding of the epistemological and philosophical foundations of social sciences.
Teaching	Proven track record of teaching programming with an average student rating of 5/5 stars on Codementor.io. Experienced in supervising students and interns in research projects.
Languages	French: native language, English: fluent, German: B1

Education

September 2018 – September 2020: Social Sciences B.A. at UNIL, Lausanne

Social Sciences B.A. program with an emphasis on science and technology studies as well as media studies. Strong grades (5.33 GPA).

January 2016 – August 2018: Computer Science M.Sc. at EPFL, Lausanne

Graduated with a Computer Science M.Sc (5.04 GPA). Won third place in the 2017 ACCES Data Visualization Contest, Dynamic Category.

September 2011 – August 2016 : Computer Science B.Sc. at EPFL, Lausanne

Work

October 2022 - present: Independent consultant

Providing consulting services for backend development, machine learning applications, data engineering and data science to startups and established companies.

Technologies: Python, Ruby on Rails, PostgreSQL, Redis, Airflow, JavaScript, Docker.

August 2021 – present: PhD student at the Laboratory for the History of Science and Technology, EPFL, Lausanne

Conducting research on data practices in public administration through ethnography and critical data studies. Active participation in data/AI-related projects across multiple levels of government.

November 2020 – August 2021 (contract work): Data+Software Project Manager at Direction Générale de la Santé du Canton de Vaud, Lausanne

Project manager at the COVID-19 contact tracing center. Doubled the capacity of the contact tracing center of Canton de Vaud by automating data entry and implementing ETL pipelines. Built a bespoke backward tracing application used daily by over 50 operators. Scaled up the engineering team from 1 to 4 engineers. Led the development of an analytics pipeline and oversaw the implementation of new data collection processes.

Responsible for IT coordination around contact tracing.

Technologies: Python, PostgreSQL, InfluxDB, D3.js, Pandas, Django, Docker.

Other skills: decision-making, agile project management, communication.

September 2018 – September 2020: Machine Learning Engineer at the Distributed Information Systems Laboratory, EPFL, Lausanne

Built a scalable computer vision application implementing reverse image search using dense vectors computed with convolutional neural networks, as well as an active-learning pipeline for labeling images. Set up CI and testing infrastructure. Supervised research interns and student projects.

Technologies: Python, PostgreSQL, Django, PyTorch, Celery, Redis, JavaScript, Vue.js, Terraform, Ansible, S3, EC2.

June 2017 – August 2018: Software Engineer at 89grad GmbH, Bern, Switzerland

Built data-processing software for e-commerce handling millions of products. Improved a CNN-based image denoising algorithm as part of my master's thesis.

Technologies: Python, PyTorch, PostgreSQL.

July 2013 – Current: Python Expert on AirPair.com and codementor.io

Mentoring clients on various Python projects with an average rating of 5/5 stars.

June 2012 – 2022: CTO / Co-Founder at Edgecom SARL, Pully, Switzerland

Consulted for early-stage startups, providing technical expertise and developing applications.

Technologies: Python, Flask, Django, Javascript, OAuth, Scrapy.

January 2011 – February 2013: Python Developer at CoMeLab SA, Lausanne, Switzerland

Designed and built a laboratory information system. Set up a fault-tolerant and scalable infrastructure for hosting the system. The software has then been acquired by the Swiss branch of Synlab SA, the leading provider of laboratory services in Europe.

Technologies: Python, PostgreSQL, Django, Puppet, Fabric.

March 2008 – February 2009: LAMP / Python Trainee at Bemore SA, Lausanne, Switzerland

References

Christian Von Plessen

Medical Director for Contact Tracing at Direction Générale de la Santé du Canton de Vaud, Lausanne
christian.von-plessen@vd.ch
+41 79 316 55 58

Rémi Lebret

Scientist at the Distributed Information Systems Laboratory, EPFL
remi.lebret@epfl.ch
+41 21 693 12 57

Christoph Böcklin

Lead Engineer at 89grad
+41 58 46 91514