

Serafeim Loukas

Data/Research Scientist

Nationality: Greek

DOB: 25/11/1992

Swiss Work Permit: G

Marital Status: Married

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🔗 <https://seralouk.github.io/>

Short Bio

Your engineer and data scientist specialist with international background and strong interest and knowledge in Machine Learning, Data Science & Visualization, Statistics and Programming.

Professional Experience

Jun 2021–Present	Research/Data Scientist University of Geneva & University Hospital of Bern, Switzerland. <ul style="list-style-type: none">• Employing Machine Learning (predictive & clustering methods), Data Science and Data Visualization methods for research projects.• Performing statistical and quantitative analysis using Python & MATLAB to answer scientific questions.
May 2020–Present	Data Science Writer Medium Corporation, https://seralouk.medium.com/ <ul style="list-style-type: none">• Mastered written communication by delivering 25+ high-quality scientific articles about well-known machine learning topics & algorithms.• Utilized exceptional writing, editing and proofreading skills to produce engaging and error-free content for 25+ articles.
Jun 2017–May 2021	PhD Research Scientist Swiss Federal Institute of Technology of Lausanne & University of Geneva, Switzerland. <ul style="list-style-type: none">• Mastered Machine Learning, Data Science & Visualization, Statistics, Network Science, Graph Theory and programming in Python & MATLAB by successfully completing 6+ research projects.• Supported research by creating statistical frameworks to answer scientific questions producing 6+ concrete project outcomes.• Performed statistical and quantitative analysis for 4 years using Python & MATLAB.• Developed exceptional scientific writing and communication skills by preparing reports and presentations for conferences. Developed strong sense of teamwork by collaborating on various projects.
Jun 2017–May 2021	Teaching Assistant Master courses: Image Processing I, Image Processing II, Signal processing for brain imaging. Swiss Federal Institute of Technology of Lausanne, Switzerland. <ul style="list-style-type: none">• Created the lab exercises and used repetition, which enabled the students to grasp new mathematical concepts quickly.• Developed strong management and collaboration skills by managing student learning objectives through personalized assistance & assignments for 4 consecutive years.

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| Jun 2017–May 2021 | Ambassador of the E3 Excellence in Engineering Summer internship program. Swiss Federal Institute of Technology of Lausanne, Switzerland. <ul style="list-style-type: none">• Developed strong communication and management skills by establishing contact with students worldwide to promote the E3 Program, as a selected ambassador. |
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Education

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| Feb 2017–May 2021 | Doctor of Science (PhD) in Electrical Engineering Swiss Federal Institute of Technology Lausanne & University of Geneva, Switzerland. <ul style="list-style-type: none">- <i>Dissertation: "Methods for functional connectivity and morphometry in neonatal neuroimaging to study neurodevelopment".</i>- <i>Keywords: Network science, Machine Learning, Signal Processing, Python.</i> |
| Sep 2015–Feb 2017 | Master in Neuroscience (M.Sc.) University of Geneva, Switzerland. <ul style="list-style-type: none">- <i>Thesis: "Effective connectivity analysis of brain networks in preterm infants".</i>- <i>Keywords: Brain networks, Signal Processing, Big Data, MATLAB.</i> |
| Sep 2010–July 2015 | Diploma in Electrical and Computer Engineering 5 years program, integrated master (300 ECTS), National Technical University of Athens, Greece. <ul style="list-style-type: none">- <i>Thesis: "Analysis of biochemical phenotypes of the carotid atherosclerosis: Correlations with image-based and clinical indicators using clustering methods".</i>- <i>Keywords: Clustering, Unsupervised Learning</i> |
| Sep 2007–June 2010 | General Lyceum Certificate Aristotelian General Lyceum, Corinth, Greece <ul style="list-style-type: none">- Participation to the Panhellenic Exams 2009-2010, (19.242/20.000 points). |

Awards and Distinctions

- **"Summa Cum Laude Merit Award"**, International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM) 2020.
- **"Best poster presentation award"**, Neuroscience Day (2016) at Campus Biotech, Geneva.
- **"Honorary Distinction: Excellent lyceum student"**, (2010) by the Cultural Center of Corinth, Greece.
- **"Honorary Distinction: Excellent gymnasium student"**, (2006-2007) by the Ministry Of Education, Greece.

Skills & Industry Knowledge

- **Industry Knowledge:** Data Science, Data Analytics, Data Visualization, Machine Learning, Statistical learning, Statistics & Probability, Research, Quantitative Analysis
- **Interpersonal Skills:** Communication, Collaboration, Teamwork, Critical thinking, Problem-solving, Supervision, Flexibility
- **Microsoft Office:** Excel™, Word™, PowerPoint™, Access™, Outlook™, Teams
- **Web browsers:** Internet Explorer, Mozilla Firefox, Google Chrome, Safari, Opera
- **Programming knowledge:** Python, MATLAB, SQL, Bash (Unix shell), R Studio

Foreign Languages

Greek	Native
English	Proficient User
French	Intermediate User

Selected Publications & Presentations

Journal Papers (with ML content)

- Gui, L., **Loukas, S.***, et al., 2019. Longitudinal study of neonatal brain tissue volumes in preterm infants and their ability to predict neurodevelopmental outcome. *NeuroImage* 185, 728–741. **DOI:**10.1016/j.neuroimage.2018.06.034

Conference Abstracts (with ML content)

- **Loukas, S.**, et al., (2018). "*Adaptive linear discriminant analysis for complex networks to study extreme prematurity and intrauterine growth restriction effects at school age*", Proc. Intl. Soc. Mag. Reson. Med. 26, ISMRM, Paris, France ([link](#)).

Certifications

- *Certification of completion:* **Applied Machine Learning in Python** by University of Michigan ([link](#))
- *Certification of completion:* **Statistical Data Visualization with Seaborn** by Coursera ([link](#))
- *Certification of completion:* **Learning MATLAB** by Udemy ([link](#))
- *Certification of completion:* **Python for Data Science Essential Training** by LinkedIn ([link](#))
- *Certification of completion:* **Python, ranking in the Top 10%** by TestDome ([link](#))
- *Certification of completion:* **Insights on Data Science** by LinkedIn ([link](#))
- *Certification of knowledge:* **MS Outlook, MS Access, MS Power Point, MS Excel, MS Word**

Fields of Interest & Hobbies

- Machine Learning, Data Science, Data Visualization, Signal Processing, Programming, Electrical Systems.
- *Hobbies:* Writing Data Science and ML articles on Medium.com, Skiing, Running, Gym.

References

- Upon request