

# Alessandro Marin, PhD

✉ [Alessandro.Marin80@gmail.com](mailto:Alessandro.Marin80@gmail.com)

🏠 Oslo, Norway

☎ +47 486 57 891

🔗 [Online CV](#)

🌐 [LinkedIn page](#)

🐙 [GitHub page](#)

## STATEMENT OF QUALIFICATIONS

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Physicist with 10+ years of corporate and academic experience in **software development**, **machine learning**, **scientific research**, and **technical troubleshooting**. I am eager to work with new technologies and am experienced in solving problems analytically and with creativity. I am excited about leveraging my skills in a role within **data science** and **software development**.

## PROFESSIONAL EXPERIENCE

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EMPLOYER	<b>Expert Analytics</b>	Oslo, Norway
JOB	<b>Consultant: Python developer at Hafslund-Eco</b>	March 2022 – October 2023
TASKS	<ul style="list-style-type: none"><li>• Agile software development in Python to run simulations of energy market models</li><li>• Adopted DevOps cloud technologies (Blob Storage, Service Bus, CI/CD pipelines, Kubernetes)</li></ul>	
EMPLOYER	<b>University of Oslo</b>	Oslo, Norway
JOB	<b>Senioringeniør/Senior Engineer</b>	December 2018 – January 2022
OUTCOMES	<ul style="list-style-type: none"><li>• Developed a novel machine learning method resulting in two scientific publications</li><li>• Carried out software development, data analysis/visualization to support educational activities</li><li>• Promoted to Senior Engineer in 2020</li></ul>	
EMPLOYER	<b>InterSystems Corporation</b>	Cambridge, MA
JOB	<b>Support Specialist</b>	May 2014 – August 2018
OUTCOMES	<ul style="list-style-type: none"><li>• Provided customer and developer support by solving technical issues (about 450)</li><li>• Developed applications using back- and front-end technologies</li><li>• Provided technical leadership to clients for Business Intelligence and Analytics</li><li>• Promoted to Support Specialist in 2016</li></ul>	
EMPLOYER	<b>Delft University of Technology</b>	Delft, the Netherlands
JOB	<b>Postdoctoral Scientist</b>	September 2011 – June 2013
OUTCOMES	<ul style="list-style-type: none"><li>• Developed software to model spectroscopic data</li><li>• Implemented software for laser systems using event-driven programming</li></ul>	
EMPLOYER	<b>Vrije Universiteit</b>	Amsterdam, the Netherlands
JOB	<b>Ph.D. in Biophysics of Photosynthesis</b>	April 2006 – June 2011
OUTCOMES	<ul style="list-style-type: none"><li>• Developed MATLAB software using machine learning for data modeling</li><li>• Performed analysis of spectroscopic data on high performance servers</li><li>• Published 6 peer-reviewed publications (4 first author) in academic journals</li></ul>	

## PROGRAMMING LANGUAGES AND TOOLS

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- **Machine learning** (Python, TensorFlow): NLP, regression, clustering, classification, ensemble methods, time series, web scraping, neural networks
- **Software development**: Python, ShellScript (Bash), Git, Azure DevOps, Docker, Java
- **Application development**: HTML/CSS/Javascript (D3, amCharts, Bootstrap), React, Angular, TypeScript, Django, NodeJS, REST API
- **Python development**: Pandas, Numpy, Matplotlib, SciKit-Learn, NLTK, Seaborn, SciPy, pytest
- **Data analysis and visualization**: Python, MATLAB
- **Databases - NoSQL**: MongoDB, Google Cloud/Firebase, AWS, InterSystems Caché
- **Databases - Relational**: MySQL, PostgreSQL, and SQLite

## EDUCATION

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STUDY	<b>PhD in Biophysics of Photosynthesis</b>	April 2006 – April 2012
UNIVERSITY	<b>Vrije Universiteit</b>	Amsterdam, the Netherlands
	Research in biophysics of photosynthesis	
STUDY	<b>BSc in Physics, MSc in Applied Physics</b>	September 1999 – November 2005
UNIVERSITY	<b>University of Padova</b>	Padova, Italy
	<b>Karolinska Institute</b>	Stockholm, Sweden
	Bachelor and Master in Physics at University of Padova. Master thesis on image analysis at Karolinska Institutet	
STUDY	<b>Bachelor of Music, Piano</b>	September 2001 – June 2004
INSTITUTION	<b>Conservatory of Music Benedetto Marcello</b>	Venice, Italy

## CERTIFICATES

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- [MIT Professional Education Program](#): Certificate for the “Data Science: Data to Insights” online course on Data Science and Machine Learning
- [Oracle Certified Associate](#): Java SE 8 Programmer
- [Online courses](#): Certificates (Coursera, Lynda) on machine learning, deep learning, data science
- [Oslo University - Norsk for viderekommende](#): Advanced/Proficient Norwegian, trinn IV / C1-C2

## LANGUAGES

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<b>Norwegian</b>	Professional working proficiency (Høyere nivå, C1/C2)		
<b>English, Dutch</b>	Full professional proficiency	<b>Italian</b>	Native proficiency
<b>Spanish, French</b>	Limited working proficiency		

## SKILLS

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- **Troubleshooting**: proficient in using problem solving theory on technical issues
- **Business Intelligence analytics**: provide technical guidance to optimize architecture, performance, and design of BI models and KPI's
- **Teamwork**: launched and supported research projects resulting in 11 academic publications
- **Mentoring and teaching**: mentored a new hire and BSc/MSc students who completed their projects to a high standard. Two years teaching assistant in Applied Informatics
- **Technical writing**: published 6 first-authored academic publications and 12 technical articles for InterSystems' Developer Community forum
- **Communication**: presented 16 oral talks at international conferences

## PROGRAMMING PROJECTS

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- [Science Education LDA](#) and [PERC\\_TopicModel](#): Two scientific publications of a novel machine learning method to analyze trends in scientific literature
- [DocOnce](#): Development of software targeting scientific reports and educational material
- [Machine Learning Notebooks](#): Jupyter notebooks with machine learning projects
- [PyPanda](#) and [PyPuma](#): Python applications of computational tools to model biological networks
- [Firebase-React-BoardGameGeek](#), [Firebase-React-Forum](#), [Zero-Waste-Locator](#), [DjangoResume](#), [AWS-React-File-Repo](#): Application development using React, MEAN (MongoDB, Express, Angular CLI, Node.js), Firebase, AWS, Django
- [DeepSeeButtons](#): Gather and analyze system information from Intersystems' data platforms
- [InterSystems](#): Miscellaneous projects involving InterSystems' technology