SIVAM PASUPATHIPILLAI, PH.D.

Lead Data Scientist - Tech Lead

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in svmpsp   ⊙ svmpsp

EXPERTISE

data-science   big-data   AI

LLMs   machine-learning   ml-ops

fine-tuning   prompt-engineering

software-engineering

deep-learning   distributed-systems

research-methodology

academic-writing

TECHNOLOGY

python   typescript   apache-spark

scikit-learn   pandas   pytorch

llama   langchain   huggingface

git   aws   google cloud   docker

kubernetes   gRPC   CI/CD

LANGUAGES

Italian: Native
English: Business proficiency
Spanish: Basic / B2
French: Basic / A2

REFERENCES

Ludovico Russo
VP of Engineering

in ludusrusso

✉ ludovico.russo@redcarbon.ai

Perttu Ranta-aho
Senior Manager

in prantaaho

✉ perttu.ranta-aho@withsecure.com

ABOUT ME

*I am an experienced **AI specialist** with over 5 years of experience in designing, building and deploying **production-ready** AI products and services.*

*For most of my career, I have worked **internationally** in the **cyber-security** domain. I am well-versed in designing, implementing, validating, deploying and operating machine learning systems with measurable business outcomes. In particular, I have expertise in **software engineering**, big data management, and all phases of **AI product development**. More recently, I have worked with **large-language models** fine tuning, prompt engineering and deployment in production environments.*

*I am **passionate** about my work and I strive to **keep improving**. I am focused and **goal-oriented** and I thrive in environments where I am able to work independently, while learning as much as I can from my colleagues. I am at my best when working on **challenging projects** with measurable impact. I enjoy working on cutting-edge technological stacks and learning new tools, while following industry's best practices.*

In my free time, I enjoy outdoor activities, social dancing, mountain sports and playing guitar.

EXPERIENCE

Lead Data Scientist | RedCarbon.ai

📅 02 2024 – Ongoing   📍 Torino, Italy (remote)

- As lead data scientist at RedCarbon.ai, my responsibilities include designing, developing and maintaining our **artificial intelligence systems**. I work closely with our technical team to ensure our AI models are developed according to industry's **best practices**, and deployed in a cost-effective and scalable manner.
  I am also fully responsible for building and maintaining our internal **data science tools and libraries**, as well as our Python development tools. I also coordinate the **data collection** and data quality efforts within the company.
  Finally, I work with product and sales teams to **prototype** new feature ideas based on AI subsystems [**fine-tuning**, **ml-ops**, **llms**, **software-engineering**, **research-methodology**].

Senior Data Scientist | WithSecure Corporation

📅 04 2019 – 12 2023 (4y)   📍 Helsinki, Finland (remote)

- During my time at WithSecure, I have built several **intrusion detection systems** to better protect our customers. I have also contributed to our teams software development practices by implementing **internal tools** and libraries for streamlining the development workflow. I participated

in product-oriented **industrial research** and I contributed to **EU research project** deliverables [**data-science**, **big-data**, **ml-ops**, **software-engineering**, **academic-writing**, **research-methodology**].

Software Engineer | Mind-Mercatis S.r.l.

📅 09 2015 – 10 2016 (1y)   📍 Milan, Italy

- As a Mind-Mercatis consultant, I was responsible for designing and building software solutions tailored to the needs of our customers. I developed several **business integration** processes to improve the information flow among our customers' software systems [**software-engineering**].

EDUCATION

Doctorate in Data Science | University of Trento

📅 11 2016 – 11 2020   📍 Trento, Italy

- Thesis: Modern Anomaly Detection: Benchmarking, Scalability and a Novel Approach

Joint M.Sc. in Computer Engineering | Politecnico di Milano

📅 10 2012 – 10 2015   📍 Milan, Italy – Barcelona, Spain

- Universitat Politècnica de Catalunya (BarcelonaTech)
- Thesis: The Asymmetric Traffic Assignment Problem on Large Scale Networks

PUBLICATIONS & PUBLIC SPEAKING

- "AI & Cybersecurity: trend, risk or opportunity?" Webinar (Italian only). WithSecure Corporation, September 2023.
  https://register.gotowebinar.com/recording/3010662282294010800

- Pasupathipillai, Sivam. "Modern Anomaly Detection: Benchmarking, Scalability and a Novel Approach." Diss. University of Trento, 2020.

- Pasupathipillai, Sivam, and Emanuele Della Valle. "Approximate distance-based anomaly detection at massive scale." 2020 IEEE International Conference on Big Data (Big Data). IEEE, 2020.

- Brugnara, Martin, et al. "Data management and smart cities." white paper, IEEE Smart Cities (2019).

- Balduini, Marco, Sivam Pasupathipillai, and Emanuele Delia Valle. "Cost-aware streaming data analysis: Distributed vs single-thread." Proceedings of the 12th ACM International Conference on Distributed and Event-based Systems. 2018.

- Pasupathipillai, Sivam. "The Asymmetric Traffic Assignment Problem on Large-Scale Networks." Diss. Politecnico di Milano, 2015.