

Victor Gueorguiev

Senior Machine Learning Engineer

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Summary

I have diverse experience as a data scientist and ML engineer, utilizing my analytical, statistical, and programming skills to collect, analyze, and interpret large data sets, and to build end-to-end AI solutions.

I have deployed actionable data-driven solutions, implemented impactful AI features, and solved multiple difficult business challenges. I hold a master's degree in AI and computer science. My wide range of technical competencies include statistics, deep learning, Bayesian optimization, reinforcement learning, NLP & LLMs, software engineering best practices, and cloud infrastructure & Kubernetes.

Work Experience

Senior ML Engineer, Living Homes

January 2025 – Present

- **Senior ML Engineer** for the product's cognitive AI backend layer
 - End-to-end feature development on multiple critical path features with product owners from user story and design to QA handover.
 - Built an assortment of features such as: RL-based sleep environment optimization, statistics-driven sleep & health analysis, user voice ID recognition via deep learning, and LLM-driven natural language home automation and commands, multiple internal and external API integrations exposed as tools for the product's conversational AI agent.

Technologies: Python, Azure, PostgreSQL+MongoDB, Docker, Kubernetes, Temporal, LLMs, Langchain, RL

Senior Data Scientist & Team Lead, VMware Carbon Black

June 2023 – September 2024

- **Team Lead** for the data team, encompassing data visualization, data engineering, and data science.
 - Led collaborations between data teams, engineering, customer success, and product management teams to plan and deliver successful data projects for EDR product cost optimization and customer analytics.

Technologies: Python, AWS, GCP, PostgreSQL, Spark, Tableau

Senior Data Scientist, VMware Carbon Black

Sep 2021 – June 2023

- **Senior Data Scientist** specializing in the cybersecurity domain at Carbon Black.
 - Built signature projects: cloud product cost monitoring and reduction in AWS, EDR ML-driven alerts, cost anomaly detection, LLMs for explainable alerting, and a customer churn model.
- Created cost monitoring tools, anomaly models, and governance methodologies to monitor Carbon Black's AWS & GCP cloud infrastructure costs at a granular level.

Technologies: Python, PyTorch, TensorFlow, AWS, GCP, Terraform, LLMs, Langchain

Senior Data Scientist, Amplify Analytix LTD

Jan 2018 – Aug 2021

- **Senior Data Scientist** specializing in delivering analytics to sales and marketing teams.
- **Product Dev Lead** for the first marketable product at Amplify Analytix on optimizing SEO using reinforcement learning.

Technologies: Python, R, Reinforcement Learning, MySQL, Tableau

ML Research Mentor, UCT, Cape Town

July 2015 – Dec 2017

- **Machine Learning Research Mentor** for the Centre for Artificial Intelligence Research (CAIR) Lab internship program at the CSIR:
 - Led research on the feasibility of robotic 3D space understanding, and new time-series forecasting models for financial markets.

Technologies: Python, Machine Learning, Time-Series Forecasting

Projects

AI-based User Voice ID Recognition

AI-based user voice ID recognition for the Living Homes product.

- Built a voice ID recognition system that can identify users by their voice in near-real-time, and use that to personalize the user's experience.
- Achieved using fine-tuned Nvidia NeMo models.

Technologies: Python, Azure, Deep Learning, AI

EDR ML-Driven & Explainable Alerting

Machine-learning alerting for endpoint detection and response (EDR), with LLM-based explanations to make alerts interpretable.

- Developed ML-driven alerting to improve detection signal in the EDR product.
- Applied LLMs to generate human-readable explanations for alerts.

Technologies: Python, PyTorch, LLMs, Anomaly Detection, Bayesian Methods

SEO Optimization via Reinforcement Learning

Amplify Analytix's first marketable product, optimizing SEO using reinforcement learning.

- Led product development from concept toward a marketable offering.
- Designed the reinforcement-learning approach driving SEO optimization.

Technologies: Python, Reinforcement Learning

Skills

Languages: Python, Java

ML Methods & Stack: TensorFlow, PyTorch, RL, Bayesian Methods, Langchain, LLMs

Cloud & Infra: GCP, AWS, Terraform, Azure, Docker, Kubernetes, Temporal

Data & Databases: MySQL, PostgreSQL, MongoDB, Spark, Redis, Neo4j

BI & Reporting: Tableau, Mode, Looker

Education

Master of Science in Machine Learning and Artificial Intelligence

KU Leuven, Belgium

Bachelor of Science in Computer Science, Physics, and Mathematics

UCT, Cape Town

Languages

English: Native Proficiency

Bulgarian: Native Proficiency

Dutch: Intermediate

Danish: Intermediate

Publications

Gueorguiev, V., & Kuttel, M. (2016, September). Implementation, Validation and Profiling of a Genetic Algorithm for Molecular Conformational Optimization. In Proceedings of the Annual Conference of the South African Institute of Computer Scientists and Information Technologists (p. 16). ACM.