

Duke Masters in Artificial Intelligence | Mid-level Software Engineer
Looking for full-time opportunities and internships in Software Engineering
and Machine Learning

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AREAS OF EXPERTISE

- Object-oriented programming
- Design/architecture patterns
- Containerization (Docker, K8S)
- Active monitoring and alerting
- Functional testing
- Scalability
- Documentation
- Microservices
- Machine Learning
- Data Science
- SCM (Git)
- CI/CD
- SEO
- Caching (Redis)

FRAMEWORKS & LANGUAGES & TOOLS

- Numpy
- Pandas
- PyTorch
- Tensorflow
- Node.js
- Laravel
- React
- .NET C#
- Java
- Python
- Golang
- GraphQL
- SQL
- Jira
- Jenkins
- ArgoCD
- New Relic
- Kibana
- AWS
- Azure
- Google Cloud

WORK EXPERIENCE

MSK (Memorial Sloan Kettering Cancer Center)

New York, USA

AI Student Consultant

Dec 2023 – May 2024

- Spearheaded the development of a POC model using Markov Decision Processes to enhance census prediction accuracy, thus improving resource management of the pediatric department (e.g. optimal bed allocation).

FARFETCH

Porto, Portugal

Full-stack Software Engineer

Sep 2018 – Jul 2023

- Designed and led end-to-end agile development of multiple web microservices reducing by 20% the codebase of a monolith and removing dependency on legacy platform services, demonstrating a desire to be an impactful key contributor.
- Successfully migrated two major REST APIs to GraphQL, reducing response times by up to 60%
- Drove company-wide definition of GraphQL by leading technical discussions and the implementation of guidelines documentation, from schema contribution to the revision process, streamlining collaboration across teams, and accelerating code review and testing.
- Helped on-call engineers solving critical issues promptly to minimize system downtime and ensure a positive user experience.
- Worked closely with the QA team to establish automated testing procedures, reducing the number of software defects by 30% and enhancing product stability.
- Achieved 100% commitment to performance budgets for every release by seamlessly integrating JMeter performance tests scripts on BlazeMeter into the deployment pipeline.
- Enforced proactive usage of monitoring tools (New Relic, Grafana, Jaeger, and Logz.io) within the team, achieving a remarkable 65% reduction in production bugs over 4 months, showing proactivity, vision, and autonomy.
- Migrated two .NET Framework microservices to .NET Core, cutting operating costs by over 70% as part of a long-term server transition from Windows to Linux.
- Boosted product crawled pages by over 15% by replacing the existing category tree in Farfetch's sitemap with an AI-generated category model in collaboration with the data science team, showcasing effective communication skills and teamwork.
- Led SEO enhancements by strategically adding links to less-crawled pages, leading to a 60% increase in crawled Product Display Pages and a 40% increase in Product Listing Pages, just in the United States.

LOBA.CX

Software Engineer Intern

Oliveira de Azemeis, Portugal

Feb 2018 – Jun 2018

- Defined the high-level architecture for an e-commerce PaaS (Platform as a Service) project using customers in premise servers as a constraint.
- Designed a cost-effective alternative to Private Packagist by creating a successful proof of concept using Satis, a static PHP package repository generator, to enable remote updates of the customer back office.
- Led the development of a back-office web portal and designed a cost-effective proof of concept that enabled remote updates of the customer back office (Laravel web application with Laravel Blade for the UI).

EDUCATION

DUKE UNIVERSITY, Pratt School of Engineering

Durham, NC, USA

M.Eng. in Artificial Intelligence

Aug 2023 – Sep 2024

- Coursework: Sourcing and Modeling Data (Pandas, NumPy), Supervised/Unsupervised Machine Learning, Deep Learning, MLOps, Large Language Models, Computer Vision, Optimization (Pyomo), Business Fundamentals
- Projects:
 - **Duke Generative AI Hackathon 2023:** CodeTales: Programming Stories for Children (GPT 3.5-Turbo, Python, Azure AI Speech Services, DALL-E) (<https://github.com/jpscardoso97/code-tales>)
 - **MEng AIPI Kaggle Competition 2023** – (<https://github.com/jpscardoso97/philarmoniab-kaggle>)
- Other activities:
 - Co-founder of Duke AI club
 - Member of Pickleball club
 - Intramural Sports

INSTITUTO SUPERIOR DE ENGENHARIA DO PORTO (ISEP)

Porto, Portugal

Sep 2018 – Jun 2021

M.S. in Software Engineering

- Publications: [Guide for Microservices in Greenfield Projects](#)
- Coursework: Software Architecture, Domain Engineering, Systems Integration, Software Engineering Quality, Innovation and Entrepreneurship, Cybersecurity, People and Team Management, Advanced Programming Techniques
- Projects:
 - Pharmacy E-commerce Platform (.NET)
- Achievements: Distinguished graduate (merit award)

INSTITUTO SUPERIOR DE ENGENHARIA DO PORTO (ISEP)

Porto, Portugal

Sep 2015 – Sep 2018

B.S. in Computer Engineering

- Coursework: Principles of Computing Principles, Programming Paradigms, Software Engineering, Computer Networks, Systems Administration, Databases, Information Structures, Advanced Algorithms, Graphical Systems and Interaction, Data Analysis and Statistics, Computer Architecture, Business Management, Linear Algebra, Computational Mathematics, Discrete Mathematics, Applied Physics
- Projects:
 - Healthcare Management System (Java, Typescript, MongoDB, MySQL)

PROJECTS

- **FeedProducts:** .NET background service application that imports products from 3 different sources and integrates the data into a single SQL database.
- **MaintenanceTasksManager:** maintenance tasks management web back-office in .NET. Uses RabbitMQ as a message broker to deliver notifications for newly created tasks.
- **Pharmacy-Ecommerce:** microservice-oriented platform written in C# that bundles a set of GraphQL APIs exposed by a unique gateway. Each microservice serves a single domain for the platform: Prescriptions, Products, Customers, ShoppingCart, Checkout and Orders.
- **GuestlistManager:** Golang REST API using Gin framework to manage the guests of the year-end party.
- **CodeTales:** Python web application that leverages OpenAI APIs and Microsoft AI Services to generate short stories for children involving the basic principles of programming. It generates the written story, the illustrations, and the audio version of the story.

CERTIFICATES AND INTERESTS

- **Certificates:**
 - *OSS PaaS and DevOps* (Microsoft)
 - *Python for Data Science and ML Bootcamp*
 - *Go: The complete developer's guide*
 - *Leading Effective Meetings*
 - *GraphQL by Example*
 - *Embracing a culture of feedback*
- **Interests:** Travel; Technology; Basketball; Football; Tennis; Heavy Music; Horror Movies