Daniel Micallef

Python Developer with 9 years of experience in fintech, gaming and Edge AI industries. Expertise in Django Web Framework and good knowledge of different Machine Learning algorithms. Graduated with a Bachelor's degree in Artificial Intelligence in November 2015.

EXPERIENCE

Aracor AI, Remote — *FullStack Developer*

April 2025 - August 2025 (5-Month Contract)

Aracor AI builds AI agents for the legal houses. Within this fast–paced contract I:

- Resolved critical database bottlenecks in Aracor V1, implementing query optimisations and schema improvements that enabled a successful production launch
- Designed and implemented RESTful APIs (using FastAPI), handling user and file management, payment processing, and data extraction from various file formats
- Collected user analytics to optimize the user journey and enhance product performance

SmartCow, Malta — *FullStack Developer*

June 2022 - December 2024

SmartCow is an Nvidia partner which designs and manufactures edge devices capable of running AI models. At SmartCow I have been involved in creating a number of B2B projects to write scalable applications. The common goal throughout these projects is to be able to collect data generated by AI models from thousands of devices, aggregating it, and making it available through an API. The main tools we leveraged are FastAPI, Pydantic, Kafka, Redis, and Docker. Different databases including MongoDB, PostgreSQL, TimescaleDB, and SQLite, are used depending on the requirement of the specific project.

During planning and development of these projects I have always been involved in discussions and weekly meetings with clients.

At SmartCow I was also responsible for developing a product license management software, which facilitates a communication flow between the sales team, manufacturing team, and the client. All purchase orders, and their status are logged through this system. I lead the development of this project and wrote the backend using Django Rest Framework.

CONTACT

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SKILLS

Programming

Strong knowledge of Python 3, Django, FastAPI, and Docker. Experience with React, Vue JS, Vanilla JS, and GoLang

Databases & Services

PostgreSQL, TimescaleDB (using Django ORM and SQLAlchemy), Redis, MongoDB, Ansible, AWS, MinIO

Message Queue Systems

Kafka, RabbitMQ

Development

Git, Pycharm

Other

Machine Learning

Other

Former Co–organizer for PyMalta meetups, a Python community in Malta.

Fitness Enthusiast - competed in Powerlifting competitions and

Umnai, Malta — *Python Developer*

September 2021 - June 2022

Part of a small team working on developing a closed-source Python library with the goal of helping developers create explainable AI. The library makes use of a number of popular python libraries including Pyspark, Pydantic, SQLAlchemy, and Pandas.

Gaming Innovation Group, Malta — *Python Developer/Senior Python Developer*

February 2018 - September 2021

I joined GIG to form part of a new team in charge to create a new crawling product, which provides value to customers by searching for images, text, and links on thousands of web pages the client is interested in. These web pages are both given by the user, and auto-generated, depending on what we think is useful for our client (based on search engine rankings).

Highlights from the product include:

- Written using Django Web Framework and VueJS;
- Deployed on both bare metal machines using Ansible whilst using AWS services;
- Application of Convolution Neural Networks for object detection in images;
- Infrastructure has been scaled considerably to crawl millions of websites a month;

Other projects included a highly performant web app written in GoLang (where response time is critical), development of different APIs. Most APIs were also written in Django, whilst some POC ideas were implemented in Flask. All applications written were dockerized.

I started off as a Junior Python Developer and progressed to a Senior member of the team during my time at GIG.

RS2 Software, Malta — *Application Developer*

July 2015 - January 2018

Formed part of the Delivery Team with the responsibility of creating tools for schema management. I also wrote and maintained plugins for Atlassian Jira. These plugins were written using Java and frontend web technologies. Furthermore I was involved in supporting RS2 clients, both on-site and remotely. This included bug-fixing and explaining to the client how the software is to be used.

Some projects included:

- Creating ETL layers for reporting purposes.
- Flask web application which simplifies the process of compiling schema documentation into one pdf document.
- A Jira UI which generates scripts for schema changes.

completed a full marathon.

Personal Finance - being financially educated is an important skill which enables someone to work on projects they are passionate about

LANGUAGES

English

Maltese

- Mail handlers which transform client emails into JIRA issues.
- Re-writing file parsing packages with performance in mind.

RS2 Software, Malta — *Student Intern*

July 2014 - July 2015

Formed part of the Research department at RS2 and investigated different use cases for Docker and Vagrant for the company. Was first introduced to Python and started writing scripts to ease workflows.

EDUCATION

University of Malta, Malta — *B.Sc IT in Artificial Intelligence*

October 2012 - June 2015

Successfully completed all coursework leading to B.Sc in Artificial Intelligence, including a deep dive into Machine Learning, Natural Language Processing, Web Intelligence, Data Structures and Algorithms, Computability and Complexity and Search Engine Technology.

As described in the Projects section the dissertation "Automated pathology detection in the brain" focused on the possibility of using Machine Learning algorithms to ease the process of detecting pathologies in CT Scans of the brain.

De La Salle College, Birgu — *Advanced Level Matriculation Certificate*

October 2010 - June 2012

Studied and completed Advanced Level Education in Computer Science, Pure Mathematics, Physics, Accounts and English.

San Andrea School, Mgarr — *Ordinary Level Matriculation Certificate*

October 2008 - June 2010

Studied and completed Ordinary Level Education in various subjects including Computer Science, Mathematics, Physics, and Accounts.

PROJECTS

Financial Fortify — *April 2021 - July 2022*

A financial education website developed using Gridsome and Django Web Framework. financialfortify.com is no longer an active project.

Know Me Now— *March 2018*

A POC about using the Ethereum Blockchain for a KYC application. GoLang was used extensively.

Automated pathology detection in the brain — January to *June 2015*

Dissertation Project for Bachelor's Degree. Collected a number of CT Brain scans and tried to use different Decision Trees to detect if there is a pathological area in the brain.