Ainsley Penza

Currently Located: Brighton, United Kingdom

(Available for Part-Time 20-Hour Student Researcher Roles)

EDUCATION

University of Sussex — Brighton, UK

Master of Science (MSc) in Management of Information Technology

- **Status:** Now Attending (September 2026 – Expected Late 2027)

Malta College of Arts, Science and Technology (MCAST) — Malta

Bachelor of Science (BSc) in Software Development

- **Graduated:** December 2025

TECHNICAL SKILLS

- **Machine Learning & Computer Vision:** YOLOv12, Tesseract OCR, PyTorch, Object Detection, Image Processing, Dataset Manipulation.
- **Programming Languages:** Python, Java, C#, SQL, TypeScript, JavaScript.
- **Backend & Infrastructure:** ASP.NET Core, Node.js, Express, Entity Framework Core, PostgreSQL, MS SQL Server, Basics of Google Cloud and Microsoft Azure.
- **Tools & Deployment:** Git, GitHub Actions (CI/CD), Postman, Swagger, Visual Studio Code.

RESEARCH & MACHINE LEARNING EXPERIENCE

Computer Vision & ML Researcher (Academic Project) — Malta

Automated Invoice Data Extraction System

- Designed and engineered an automated machine learning pipeline combining object detection and optical character recognition (OCR) to extract structured data from unstructured invoice documents.
- Implemented and trained YOLOv12 models to accurately identify and draw bounding boxes around critical invoice fields across highly variable document layouts.
- Developed comprehensive Python scripts to handle dataset manipulation, pre-processing, and image optimization to maximize Tesseract OCR reading accuracy.
- Authored detailed research logbooks and technical documentation evaluating model performance, algorithm efficiency, and practical real-world application metrics.

PROFESSIONAL ENGINEERING EXPERIENCE

Junior Software Developer — Nov 2022 – Present (Part-Time/Flexible)

MallSystems Limited

- Architect backend APIs, database views, controllers, and services using C# and Entity Framework Core to support high-traffic software solutions.
- Frontend development using Angular to create responsive and interactive user interfaces.
- Collaborate with cross-functional teams to gather requirements and translate them into technical specifications.
- Manage complex relational databases across SQL Server, formulating advanced T-SQL queries and stored procedures to optimize data retrieval speeds.
- Configure automated deployment pipelines and CI/CD workflows using GitHub Actions and IIS to ensure seamless integration of new software features.

Trainee Software Developer — Malta

Dakar Software Systems

- Developed and integrated hardware-to-software pipelines using Python and C# within enterprise human resources software modules.
- Successfully implemented direct integrations with ZKTeco biometric time-attendance devices and thermal printing hardware for secure, real-time data syncing.

ADDITIONAL INFORMATION

- **Languages:** English (Fluent), Maltese (Native), Italian (Basic)
- **Interests:** Machine Learning, Computer Vision, Software Development, Listening to Music.