

# Maksymilian Matusiak

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## Education

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**Queen Mary University of London, BSc Computer Science with Mathematics (1st Class)** **2022 – 2025**

- Key Modules: Algorithms and Data Structures, Software Engineering, Web Programming, Security Engineering, Distributed Systems, Neural Networks and Deep Learning

**Woodhouse College, A Levels: Economics (A), Mathematics (B), Physics (B)** **2020 – 2022**

## Work Experience

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**Goldman Sachs - Software Engineering Virtual** **April 2023**

- Conducted a **security audit on password hashing algorithms** using Hashcat, identifying vulnerabilities.
- Delivered a **security enhancement report**, proposing stricter policies.
- Reviewed code coverage in high-risk modules, preventing potential exploits.

**Hewlett Packard Enterprise - Software Engineering Virtual** **Aug 2023**

- Built a **RESTful web service** in Java (Spring Boot) with role-based authentication.
- Achieved high test coverage with JUnit, minimizing deployment issues.
- Containerized the application with Docker for consistent environment setups.

**Full-Stack Web Developer (Freelance)** **June 2025 - Present**

- Communicated with clients to provide the best suited software solution
- Built responsive, full-stack applications using React, JavaScript, TypeScript, Django and RESTful APIs

## Projects

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**GRU Stock Market Price Predictor** **Oct 2024 - Apr 2025**

- Built an GRU model in Python for predicting US stock closing prices, using Yahoo Finance data.
- Leveraged TensorFlow, Pandas, Matplotlib; tuned hyperparameters for accuracy.
- Achieved **<5% MAPE** across multiple test windows, demonstrating consistent, high-accuracy forecasting.

**CNN CIFAR-10 Image Classifier** **Mar 2025 – Apr 2025**

- Engineered a CNN in PyTorch achieving **>90% test accuracy** on CIFAR-10 with a novel attention-based expert block architecture.
- Applied data augmentation (random crop, horizontal flip) and batch normalization, improving model generalization on **60,000 images**.
- Reduced GPU memory usage and training time by up to **40%** using `autocast()` and `GradScaler()` for efficient half-precision training.

**FDM Expenses Application** **Jan 2024 - Apr 2024**

- Built a business expense tracking app with secure login and multi-device support.
- Provided a visual dashboard for real-time expense summaries.

## Skills

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**Programming Languages:** Java, Python, JavaScript, TypeScript, R

**Frameworks:** Spring Boot, Swift, Django, React, Vue, TensorFlow, PyTorch

**Cloud & Tools:** GCP, AWS, Apache Spark, Jenkins, Hashcat, PostgreSQL, Figma, CI/CD, Jupyter Notebook, Anaconda

**Soft Skills:** Leadership, Research, Problem-Solving, Teamwork, Communication