Xiang Xiang Ma

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Skills

Programming: Python, Java, C/C++, JavaScript, SQL (MySQL), Bash
Frameworks and web: Flask, FastAPI, HTML/CSS
Developer Tools: Git, Docker, CircleCI, Google Cloud Platform, VS Code, PyCharm
Libraries: pandas, NumPy, SQLAlchemy, Scikit-learn, Matplotlib, D3, Tensorflow
Testing: unittest, Selenium
Languages: English (fluent), Italian (native)

Education

The University of Manchester — Manchester, UK
MSc in Advanced Computer Science, AI Specialisation — *2018 – 2019*

University of Bologna — Bologna, Italy
BSc in Computer Science and Engineering — *2014 – 2018*

Work Experience

Software Engineer, AI frameworks — Jun 2022 – Present
Intel — *Netherlands*

- Member of the Interactive AI team.

Data Scientist — Feb 2020 – Jan 2022
COFCO International — *Geneva, Switzerland [Remote]*

- Researched and implemented Asian options pricing models for portfolio P&L simulations.
- Developed a full-stack web application using Flask with Bootstrap and D3 as the front-end to host interactive dashboards and tools.
- Worked with traders to upgrade market data pipelines for improved data consolidation.
- Improved data availability through data migration from multiple vendors to a unified MySQL database.
- Introduced git and CI/CD tools to the data science team, enabling cross-departmental collaboration.

Software Engineer Intern — Nov 2017 – Jan 2018
Yoroi — *Bologna, Italy*

- Developed neural networks for malware detection in Scala.
- Deployed a REST API prediction server using Docker and PredictionIO.
- Improved accuracy from previous methods and presented results to the CTO.

Projects

Atlasjs | *JavaScript, D3* — Feb 2022 - Mar 2022

- Developed N-body physics simulation in JavaScript with D3 for visualisation.
- Improved performance from $O(N^2)$ to $O(NlogN)$ by implementing a quadtree data structure.
- Project-based approach for learning JavaScript. Demo available *here.*

Motion Graphs | *C++, OpenGL, ImGui, motion capture* — Dec 2018 - Sep 2019

- MSc research project on motion synthesis algorithms for digital human animations.
- Developed a 3D editor, using OpenGL and ImGui, for creating and visualising character animations.
- Implemented the motion graph technique for generating novel animations using motion capture data.
- Received distinction grade (77%). Dissertation and code available on my *github page.*