

# MATTIA DANESE

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| WORK EXPERIENCE  | <p><b>Backend Software Engineer @ Emerest</b> – .NET, C# Jun 2024 – May 2025</p> <ul style="list-style-type: none"><li>• Lead developer for reporting infrastructure, driving seamless cross-team collaboration and communication between dev and data teams</li><li>• Developed 16 API endpoints (all models, services, and handlers) for new client-facing reporting data pipelines, supporting both JSON and CSV responses and various client-side customization</li></ul> <p><b>Data Software Engineer @ Emerest</b> – Python, Typescript, AWS Jan 2024 – May 2025</p> <ul style="list-style-type: none"><li>• Developed 20+ data pipelines for daily/weekly upper management reports</li><li>• Solely responsible for deploying an automated pipeline to ingest and clean highly unstructured patient data from a third-party healthcare API</li><li>• Individually designed, developed, and managed a MongoDB (NoSQL) database that stores critical patient data principally used for client-facing reports</li><li>• Independently refactored the entire backend infrastructure codebase (30+ preexisting AWS Lambda definitions) by implementing a hierarchal (abstract) class structure and private modules</li></ul> <p><b>Full Stack Intern @ MassEnergize</b> – Python (Django), React.js Summer 2022</p> <ul style="list-style-type: none"><li>• Automated efficient and scalable importing/exporting of user content to the Admin Portal for weekly usage by 70 community admins (Google Docs API)</li><li>• Led ownership of real-time username authentication for 300+ Frontend Portal users</li><li>• Designed and deployed a monthly cron function to delete stale stored media (&gt;2.5 GB to date)</li></ul> <p><b>Full Stack Intern @ WAISN</b> – Python (Django), React.js Fall 2021</p> <ul style="list-style-type: none"><li>• Auto-translated 1,200+ resources to Spanish upon resource creation (Google Translate API)</li><li>• Interviewed ~15 clients to develop and ship ~10 minor Resource Finder features to production</li></ul> |
| PROJECTS         | <p><b>Listen Up</b> – Python, Flask, Twilio API, Google News API, ChatGPT API 2023</p> <ul style="list-style-type: none"><li>• Voice-based news app delivering real-time articles via phone calls in response to user queries</li><li>• Used the Twilio API for app interface &amp; ChatGPT API to create 5 sentence article summaries</li><li>• Decreased article process time from an average of 6.5 to 0.5 seconds by employing multithreading</li><li>• Led a team of 3 in developing an internal API as a Flask application to handle routing</li></ul> <p><b>Movie Streaming Finder</b> – React.js, Rapid API 2023</p> <ul style="list-style-type: none"><li>• Designed, implemented, and tested an end-to-end application that finds which streaming services currently offer a specific movie in specified countries</li><li>• 20 different global streaming services and 57 countries are supported</li></ul> <p><b>Optimal Goalkeeper Positioning as a RL Model</b> – Python, Machine Learning 2022</p> <ul style="list-style-type: none"><li>• Trained a Multi-Armed Bandit agent to learn the best goalkeeper position given 5 different positions of an incoming attacker</li><li>• Goalkeeper position is learned through a 2D shot distribution for each of the 5 attacker positions</li></ul> <p><b>Image Compressor and Decompressor</b> – C 2020</p> <ul style="list-style-type: none"><li>• Command line driver takes in image files to be compressed or decompressed</li><li>• Designed scalable bit-packing modules for efficient compression by collaborating with a classmate</li><li>• Applied known mathematical and RBG compression algorithms to achieve lossy compression</li></ul>   |
| TECH & LANGUAGES | <p>• Python • C/C++ • C#/.NET • Java • JavaScript/Typescript • Go • React.js • Node.js • Flask • Django</p> <p>• AWS (Lambda, S3, Redshift, SES) • Docker • Git • SQL • NoSQL • Postgres • MongoDB • MySQL</p>  |
| OTHER            | <p>• US-Italy Dual Citizen • Italian (fluent) • Spanish (conv) • Inter Milan • Skiing • Chess • Finance</p>   |
| EDUCATION        | <p><b>Tufts University</b>, Gordon Institute – MS Computer Science 2023</p> <p><b>Tufts University</b>, School of Engineering – BS Computer Science 2022</p>  |