

Anurag Saurav Mathew

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🔗 [Developer-Portfolio](#)

EDUCATION

BSc (Honours) Computer Science | University of Manchester

Graduated Jul 2025

- **Achievements & Activities:** Achieved 2:1 classification, First Class in User Experience module, Developed an AI agent for Hex with a 74.1% win rate, Integrated Spotify API into 'GhostTyper' for real-time music playback
 - **Coursework:** Designed processors in Verilog, Built Amazon-clone backend in PHP/MySQL, Developed Othello AI with alpha-beta pruning in Java, Created video games with Tkinter and JavaFX, Conducted CIFAR-100 CNN experiments, Completed Computer Vision module with full marks in image filtering/object detection, Developed enterprise web app using REST APIs, Explored AI through game AI, constraint satisfaction, and robotics labs
 - **Technical Skills:** Proficient in Java, Go, Python, C, C#, C++, Solidity, Haskell, HTML, JavaScript, PHP, MySQL, React, OpenCV; Experienced with GitLab & Github, large codebases, debugging, and agile development
- Higher Secondary Certificate, Class XII | Shubham Raje Jr. College, Thane, India** **Completed 2021**
- **Marks:** 97.5% (Mathematics & Statistics: 99%; Computer Science: 97%)

Indian Certificate of Secondary Education, Class X | HFS, Thane, India

Completed 2019

- **Marks:** 94% (Mathematics: 97%; Computer Science: 100%; Science: 94%)

WORK EXPERIENCE

Technical Support Engineer | Beckhoff Automation

October 2025 – Present

- Provide first-line technical support across **TwinCAT 3** PLC/HMI, **EtherCAT** networks, **Beckhoff IPCs**, I/O and motion—triaging tickets, reproducing issues, and delivering fixes/workarounds.
- Build customer-facing **demo projects & proof-of-concepts** (e.g., **TwinCAT Machine Learning**/ONNX deployments, basic **Vision** pipelines) to accelerate adoption and de-risk integrations.
- Create **clear documentation** and knowledge-base articles; capture learnings and feed product feedback to engineering; support short **enablement sessions** for customers and colleagues.

Food & Beverage Assistant / Team Leader | Stockport County FC

Jan 2024 – September 2025

- Delivered high-volume service to over **1,000+** customers on matchdays in a fast-paced stadium environment, ensuring speed and accuracy under pressure.
- Led bar operations during peak periods, supervising and coordinating shifts of up to **10** staff, improving overall service efficiency by approximately **20%**.
- Expanded role into retail operations, serving as a **club shop assistant** handling matchday merchandise sales and stock management.

Front of House / Team Leader | Manchester United FC

Jan 2022 – Jun 2025

- Served tens of thousands of customers across **3 Seasons** at Old Trafford, consistently meeting high hospitality standards during Premier League and cup fixtures.
- Managed small teams of **5–8** staff in high-pressure service areas, ensuring smooth operations and fast turnaround during peak demand.
- Built strong customer relationships, resolving service issues promptly to maintain satisfaction scores above **90%**.

PROJECTS

Walking on Words (Final Year Dissertation)

Completed Jul 2025

Formalised a novel “walking” model of word generation, extending primitive-word theory to bounded-step surjective walks. Designed and implemented algorithms to explore combinatorial properties, achieving efficient $O(n^4)$ solutions and validated results via experimental evaluation. Commended by examiners for depth and rigor.

GhostTyper – Real-time Typing Game with Spotify API Integration

Deployed May 2023

Built a typing game in Python integrating the Spotify API to stream songs and sync lyrics in real time. Optimised database efficiency with MySQL indexing and caching, improving query speed by **30%**. Enhanced user engagement by dynamically adjusting difficulty based on lyric tempo.

Hex AI Agent – AI and Games Module

Completed Dec 2024

Developed an AI agent in Java to play Hex, leveraging alpha-beta pruning with heuristics to optimise move selection. Our group achieved a **74.1%** win rate (47/76 games) and ranked **19th** in speed (78.6 mark) among all submissions.

Enigma Simulator – Cryptography Tool in Go & React

In Development

Designing a cross-platform simulator for the WWII Enigma machine using Go for backend cryptographic logic and React + TailwindCSS for the UI. Implemented historically accurate rotor mechanics, plugboard wiring, and step-by-step encryption visualisation for educational use.

TECHNICAL SKILLS & CERTIFICATIONS

- **Software Development:** MERN Stack, Tailwind, Bootstrap, JavaScript, TypeScript, Next.js, Django, Spring, PHP
- **Data Science & ML:** Dash, scikit-learn, TensorFlow, PyTorch, Transformers (Hugging Face), OpenCV, SpaCy, SciPy
- **Others:** Go, Python, Java, C, C++, R, Haskell, Leaflet.js, REST API, ARM Assembly, Verilog, SQL, Docker, AWS
- **Certifications:** [Software Engineering - JP Morgan & Chase](#)
- **Extra-Curricular Activities & Societies:** AI Engineer – Manchester Stinger Racing Society (Formula Student AI), Full Stack Developer – Manchester UniCS Society