

NOMAN KALEEM

Robotics & AI Developer | Full-Stack Developer | AI & Computer Vision Enthusiast

Contact

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Portfolio: <https://nomanromane.site>

Professional Summary

Passionate Computer Science undergraduate (BSc, University of West London – RAK campus) with hands-on experience across robotics, computer vision, AI integration, and full-stack web development. Completed a focused 60-day internship at AIITECH where I contributed to humanoid robot development (hardware + software), built vision and speech pipelines, and developed educational and admin backends. Currently developing an AI Market Simulation platform that provides real-time marketing insights and content suggestions to maximize engagement and forecast campaign ROI.

Key Skills

1. Programming & Web

- Python, Java, PHP, JavaScript (ES6+), HTML5, CSS3, SQL

2. AI, Machine Learning & Computer Vision

- Model integration: InsightFace (face recognition), YOLOv5 (object detection), emotion detection pipelines
- Speech: Whisper (speech-to-text), TTS integrations (ElevenLabs + pyttsx3), wake-word detection (Porcupine)
- Working knowledge of GPT APIs for conversational and prompt-driven tasks

3. Robotics & Embedded Systems

- Raspberry Pi, servo control, sensor integration, 3D printing, CAD (Tinker CAD)
- Prototyping and hardware debugging, motor control, power and signal troubleshooting

4. Frontend / UI / 3D

- Three.js, Cannon.js for interactive 3D visualizations, Figma for UI/UX design, responsive web design

5. Tools & Other

- Databases: MySQL, SQLite; Tools: Git, Figma, CapCut, Canva, Photopea, Microsoft Office

6. Soft skills

- Technical documentation, teaching/mentoring (workshops & summer camps), project management, video content creation

Experience & Projects

1- Robotics & AI Developer Intern – AIITECH

June 24, 2025 – September 4, 2025 (60 days)

Key contributions

- Contributed to **Jarviz** humanoid robot development: hardware integration, servo calibration, assembly testing and iterative 3D part redesign for improved fit and durability.
- Implemented core computer-vision modules: face recognition (InsightFace), object detection (YOLOv5), and emotion detection; tuned pipelines for reliable inference in real-world lighting and camera conditions (high operational accuracy in targeted scenarios).
- Integrated speech interaction stack: Whisper for speech-to-text, ElevenLabs (primary) and pyttsx3 (backup) for TTS, and Porcupine for wake-word detection. Linked these to a GPT API to enable contextual conversational responses.
- Built a **PyQt5** control dashboard for Jarviz with mode selection, telemetry display, and audio feedback controls; resolved stability and audio latency issues.
- Designed and implemented backend and database schema for **Edu Jarviz** (educational block-based programming platform) and created wireframes for a drag-and-drop programming interface.
- Developed and improved an **autonomous car prototype**: implemented movement control algorithms, carried out electrical debugging, and tuned motion behaviour for smoother navigation.
- Contributed mechanical/electrical enhancements to a **robotic prosthetic arm** (wrist rotation and compatibility features) and produced interactive 3D frontend simulations using Three.js and Cannon.js.
- Produced promotional and tutorial videos (CapCut) and assisted with AI-Robo Summer Camp teaching and demonstrations.

2- Full-Stack Developer / Project Lead – Live Car Auction Platform (University Project) 2025

- Architected and implemented a real-time live car auction platform using PHP, MySQL, JavaScript, HTML and CSS.
- Implemented real-time bidding mechanism, category filters, countdown timers synced to UAE local time, and a responsive, mobile-friendly interface.
- Deployed live at <https://www.motorbidz.live>

3- UI/UX Designer – Smart Home Automation Prototype (Homix) 2025

- Designed a high-fidelity Figma prototype focused on voice interactions, accessibility, and interactive components for a smart home automation product.

Personal / Ongoing Projects

AI Market Simulation Software (in development) – *Lead developer & architect*

- Building an AI-driven marketing simulation platform that:
 - Simulates market segments and audience behaviour to forecast campaign engagement and ROI.
 - Provides automated content-creation suggestions (copy, short video concepts, thumbnail/creative guidance) optimized for predicted engagement.
 - Offers A/B testing simulation, analytics dashboards, and prioritized recommendations to improve campaign performance in real time.
- Stack (planned/used): Python backend, model integration (LLMs + CV models), dashboards (web frontend), analytics engine.

Education

- **Bachelor of Science (BSc) – Computer Science**
University of West London (RAK campus) – 2023 – 2026 (ongoing)
- **12th Grade (CBSE)**
Habitat School (Al Jurf, Ajman) – Graduated 2022 – 2023

Awards & Achievements

- Best Presentation Award – International Student Research Confluence, Manipal University (2025)
- 3rd Place – RAK Innovation and Sustainability Challenge (2025)

- APJ Abdul Kalam Innovation Award (Edu Cafe)
- 1st Prize — Website Designing (school level)
- Winner — Business Idea Competition (Medical University)

Languages

- English (fluent)
- Hindi (fluent)
- Urdu (fluent)
- Arabic (basic/conversational)

Technical Summary

- **Languages:** Python, Java, PHP, JavaScript, SQL, HTML/CSS
- **CV/AI:** InsightFace, YOLOv5, emotion recognition, Whisper, GPT APIs, TTS tools
- **Robotics:** Raspberry Pi, servo control, 3D printing, prototype debugging
- **Frontend/3D:** Three.js, Cannon.js, Figma
- **Databases:** MySQL, SQLite
- **Tools:** Git, CapCut, Canva, Photopea, Microsoft Office, Tinker Cad

Links & References

Portfolio: <https://nomanromane.site>

[LinkedIn Profile](#)

[Github](#)

Figma prototypes and additional project links: available on portfolio website

References available upon request.