

# ROEL-JUNIOR ALEJO VIERNES

## Computer Science BSc (Hons) Graduate

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## PERSONAL STATEMENT

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Computer Science graduate (2:1) and multidisciplinary Creative Technologist specializing in the intersection of Machine Learning, Human-Computer Interaction and digital storytelling. From developing real-time Computer Vision systems (HandTyper) to leading technical video production for the University of Greenwich, I excel at translating complex engineering principles into high-fidelity user experiences. Seeking to leverage my background in Python, ML, and professional media production to build the next generation of AI-driven creative tools.

## PROJECTS

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### Final Year Project: HandTyper - Hand Gesture based PC Interaction

- Engineered a real-time gesture recognition system using Python, Mediapipe, and TensorFlow, enabling full PC control (mouse and keyboard) via high-fidelity hand tracking.
- Developed a custom BSL (British Sign Language) translation layer, utilizing landmark detection to interpret complex hand signals into real-time digital inputs.
- Implemented landmark detection to track hand points, facilitating accurate estimation of user gestures for seamless translation into mouse and keyboard actions.
- Optimized model performance for low-latency video feeds, ensuring smooth human-computer interaction across standard web-cam hardware.

### University Open Day Guides w/ NFC Tags

- To assist prospective students during the University Open Days whilst upholding the university's commitment to sustainability. I introduced a new interaction framework where staff members would have NFC tags linking towards a digital guide for the University and the relevant event.
- This reduced the need for approx. 300+ printed materials per event and allowed for easy access to information via smartphones.

### Coursework Project: TAS Speedruns and the use of AI in Games

- Developed an autonomous AI agent for Super Mario Bros using the Monte Carlo Tree Search (MCTS) algorithm to optimize pathfinding and level completion speed.
- Researched and implemented various Machine Learning algorithms to control CPU behavior, focusing on rapid decision-making in dynamic video game environments.
- Achieved high-efficiency pathfinding by training agents to navigate complex obstacles and enemy patterns in the fastest time possible.

## EXPERIENCE

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### Faculty Social Media Assistant

#### University of Greenwich

 June 2023 - Oct 2025

 Greenwich, London

- Multidisciplinary Production:** Managed the full lifecycle of technical video content for the Faculty of Engineering & Science, bridging the gap between deep-tech research and user-facing digital storytelling.
- Stakeholder Management:** Partnered with Professors and Researchers to storyboard and render accessible content for major university campaigns.
- Brand Growth:** Owned social media channel management for the faculty, increasing publication frequency through streamlined content workflows.
- Key Achievement: 2024/25 Clearing Campaigns:**
- Spearheaded the short-form video strategy, producing testimonials and facility showcases that drove audience engagement across faculty platforms.
- Collaborated with central marketing to ensure 100% brand consistency while translating complex engineering concepts for prospective students.

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### Senior UK Student Recruitment Ambassador

#### University of Greenwich

 May 2023 - Oct 2025

 Greenwich, London

- Team Leading: Led a team of 10+ staff/student ambassadors in clearing operations and day-to-day customer service, ensuring a high-quality experience for prospective students and their families during high-pressure periods.
- External Engagement: Represented the university at external events, including UCAS fairs, Panels, and school visits, effectively communicating the value of the university's offerings to a wide range of audiences.
- Operational Excellence: Assisted in the planning of certain outreach initiatives, contributing to the university's recruitment goals through efficient planning and execution.

## EDUCATION

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BSc (Hons) - Computer Science - 2:1

University Of Greenwich

📅 Sep 22 – Jul 25

📍 Greenwich, London

- Modules inc. HCI, Machine Learning, AI, Software Engineering, Data Structures, Advanced Programming, Operating Systems

A Level

University of Kent Academies Trust

📅 Sep 20 – Jun 22

📍 Gillingham, Kent

- Information Technology (D\*), Business Studies (D\*), Finance (BB) | 152 UCAS points

## VOLUNTEERING

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Society President

comptech.gre (Greenwich Students Union)

📅 Sep 24 - Jul 25

📍 Greenwich, London

Programme Representative

Greenwich Students Union

📅 Sep 23 - Jul 24

📍 Greenwich, London

## INTERESTS

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Technical

- Human Computer Interaction, Cloud Computing, Machine Learning, Video Editing

Hobbies

- Content Creation, Music, Traveling, Gaming

## SKILLS

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English

Tagalog/Filipino

Spanish

