

Kessel DIAROUMEYE

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Professional Profile

Engineering student pursuing dual degrees at Télécom SudParis (Institut Polytechnique de Paris) and École Polytechnique (X) in BioMedical Engineering. Specialized in computer vision, machine learning, and medical imaging applications with proven research experience in 3D reconstruction and intelligent segmentation systems. Seeking research-oriented internship leading to doctoral thesis in computer vision for healthcare or AI applications in medical imaging.

Professional Experience

3D Classification and Segmentation Research Intern, Télécom SudParis / ARTEMIS Research Department – Évry, France July 2025

- Designed and implemented a complete automated pipeline converting video input to 3D Gaussian Splatting representations, integrating YOLO11, custom CLIP fine-tuning, and EdgeTAM segmentation
- Developed custom CLIP training protocol for domain-specific human/robot classification with intelligent object selection and filtering mechanisms
- Built production-ready system with multi-level fallback architecture, comprehensive error handling, and automated privacy protection through face blurring
- Created cross-platform validation methodology optimizing performance across different hardware configurations for 3D reconstruction pipelines

Accounting Consultant, Startup Sim-Sprint – Paris, France July 2024 – Dec. 2024

- Design and implementation of an accounting simulation tool.
- Provided insights into accounting processes to enhance educational solutions.

Network Department Intern, Institut Polytechnique de Paris – Paris, France Apr. 2024 – July 2024

- Adapted École Polytechnique course content into an interactive website "Arbitre".
- Enhanced learning on modern computer networking and IoT fundamentals.

Treasurer, Student Union (BDE) Télécom SudParis – Évry, France Feb. 2023 – May 2024

- Supervised financial operations of a €500,000 fund supporting 10+ student associations.
- Led a 40-member team to organize cultural and networking events.

Projects and Achievements

3rd Place at D4GEN Hackathon, Genopole – Évry, France May 2025

- 48-hour hackathon dedicated to applying AI to medical and environmental challenges.
- Co-founder of KADSI, award-winning solution combining AI and dermatology for underrepresented skin inclusion.

Innov'Night, Institut Polytechnique de Paris – Paris, France April 2025

- 12-hour challenge to transform an innovative idea into an impact project with final pitch.
- Co-founder of Brid-gen, intelligent chatbot for psychological support and connection with campus resources.

Entrepreneurial Project - KEGO, IMT Starter Incubator – Paris, France Feb. 2025 – Present

- Founder of Kego, universal solution for digitizing receipts.
- Member of the Entrepreneurship Club.

Health Application - Ludidrep, Télécom SudParis / CHSF – Paris, France Dec. 2024 – Present

- Development of an educational application for learning to live with sickle cell disease.
- Collaboration with Centre Hospitalier Sud Francilien (CHSF).
- **Technologies:** Godot, Figma, incremental method, Git.

Crowd Management Application, University of Hong Kong – Hong Kong Sept. 2024

- Real-time crowd data, location-based services and user feedback tools.
- Time optimization for students and staff, helping administration with resource management.

- **Technologies:** Kotlin, ASP.NET Core, MySQL, Figma, SCRUM, Git.

Accounting Web Application, Télécom SudParis – Paris, France

Nov. 2023 – May 2024

- Development of a web application to streamline accounting processes for a student association.
- **Technologies:** Django (Python), SQL, Git.

French Robotics Cup, INTech – France

Oct. 2022 – May 2023

- Design and development of competitive robots for navigation and automation tasks.
- Acquired experience in mechanics and electronics.

Education

Master of Science in BioMedical Engineering (Year 2), École Polytechnique (X) – Palaiseau, France

2025 – 2026

- **Major:** Imaging and Image-Based Modeling | **Minor:** Biomedical Data Science and Applications
Focus: Medical imaging, computer vision, deep learning, and AI applications in healthcare
Concurrent dual-degree program with engineering diploma

Télécom SudParis, Generalist Digital Engineering Degree

Sept. 2022 – May 2026

- **Current coursework:** Computer vision, Machine learning, Deep Learning, Image analysis, Operating systems, Information systems and digital transformation.

University of Hong Kong, Computer science exchange program

Sept. 2024 – Dec. 2024

- **Coursework:** Computer graphics, Design engineering, Software engineering, Mobile application development, Law, Investment and trading for engineers (including machine learning).

Lycée Condorcet, Physics-Chemistry preparatory class

Sept. 2020 – June 2022

- Rigorous training for competitive entrance exams to grandes écoles, focused on physics, chemistry and mathematics.

Skills

Soft skills: Problem-solving, Leadership, Teamwork, Communication, Adaptability

Programming languages: Kotlin, C, Java, SQL, Python

Modeling and design tools: SolidWorks, Fusion 360, Eagle, Adobe Creative Suite, DaVinci resolve

Laboratory equipment: Laser cutter, 3D printer, Scanning electron microscope

Languages

French: Native speaker

English: C1 – Oxford test, TOEIC (970/990), TOEFL (96/120)

German: B1 – Kultusministerkonferenz diploma

Japanese: Beginner

Spanish: Beginner

Interests

Music: Electric guitar, DJing, former repair manager at BPM sonoclub

Sports: Marathon preparation, regional handball player

Science and Design: Secretary of robotics association (INTech) and workshop (Bricol'INT), car enthusiast

Travel and Photography: Extensive travel in Asia, Europe, North America and Africa