Loris Emanuelli

Berkeley, CA | lorisemanuelli30@berkeley.edu | +1 341 254 9806 | lorisemanuelli.fr | LinkedIn

Mechanical Associate candidate with a mechanical engineering background focused on machinery analysis and design, technical writing, and mechanical systems troubleshooting. Skilled in engineering drawings, project documentation, safety standards, and cross-functional collaboration.

Education

University of California, Berkeley - GPA: 3.73/4.00 — **Berkeley, CA, USA**

Master of Engineering in Mechanical Engineering — *May 2026*

Relevant coursework: MECENG 249 (A), MECENG 292C (A+), IEOR 242A (A-); prototyping, CAD, FEA, manufacturing, experimental design, simulation, statistics.

Studios focused on systems design, mechatronic integration, prototyping, and validation workflows.

Arts et Métiers Institute of Technology - GPA: 3.78/4.0 — **France**

Combined B.S./M.S. Mechanical & Industrial Engineering — *2019 – 2024*

Relevant coursework: solid mechanics, materials science, manufacturing processes, product and system design, CAD, FEA, experimental design, instrumentation.

Work Experience

Tutor, Alveus – Berkeley, CA, USA — *January 2025 – August 2025*

- Provided tutoring support in math, physics, and engineering fundamentals.
- Prepared concise explanations and presentations for students, strengthening technical writing skills and communication.

Operation Team Member (Intern), La Poste Groupe – Paris, France — *July 2024 – August 2024*

- Supported service development tasks and assisted with database and accounting workflows with accuracy and attention to detail.
- Coordinated with operations stakeholders to maintain project documentation and support client satisfaction.

Room Service Clerk, Park Hyatt Paris Vendôme – Paris, France — *July 2023 – February 2025*

- Managed room service delivery and coordination to maintain premium service standards.
- Prioritized multiple concurrent requests and solved operational issues under time constraints.

Projects

FormaFlow Dress | *UC Berkeley* — *2025*

- Designed a mechanical system with dual actuation paths (2 mechanisms: side flippers + waist tiles) to lift hems while preserving drape.
- Integrated IMU-based gait triggers and manual override (2 control modes) with servo actuation and compact electronics harness during product development.
- Prototyped PLA/TPU components, cable routing, and mechanical assemblies; troubleshot fit-up and iterated designs for repeatable motion.
- Conducted field work and on-site build observations in lab settings to validate integration and safety standards.
- Tools: SolidWorks, CATIA V5, 3D printing, IMU sensing, servo control, Python/MATLAB.

PJT Pied – Instrumented Foot Model | *Arts et Métiers* — *2024*

- Built an instrumented biomechanical foot model with strain-gauge sensing across forefoot/midfoot/heel regions (3 segments).
- Modeled geometry and internal routing in NX; produced drawings and designed lamella structures to support fabrication.
- Validated load cases with Fusion FEA and iterated calibration for repeatable strain measurements in a manufacturing-focused workflow.
- Wrote technical summaries of analysis results and recommendations for design review presentations.
- Tools: NX, CATIA V5, strain gauges, data acquisition.

Flying Taxi Quadricopter | *Arts et Métiers* — *2024*

- Defined system architecture for a quadcopter taxi concept (4-rotor layout) with propulsion and battery modules.
- Pre-sized motors from thrust-to-weight targets and defined stability, packaging, and safety constraints.
- Produced system diagrams and requirements for emergency procedures and urban operations.
- Tools: system architecture diagrams, sizing spreadsheets, CAD review.

Prosthesis Testing Labs | *Arts et Métiers* — *2023*

- Validated FEM models for a glenoid prosthesis under load (up to 200 N), comparing simulation and experimental boundary conditions.
- Documented shoulder kinematics measurement protocols and sensor placement for repeatable testing.
- Performed material identification via spectroscopy and property review to inform simulation inputs.
- Tools: Abaqus, spectroscopy, mechanical testing protocols.

Leadership & Activities

Handball

- Coach (ages 6–12), two departmental championships; former U18 national champion.

Student Leadership & Competitions

- Founder of ENSAM student associations (5,000+ participants); finance club contributor; national Scrabble competitor (France rank #4).

Skills

Mechanical Engineer: mechanical engineering, mechanical systems, mechanical design, mechanical assemblies, drawings, build support. **Manufacturing & Fabrication**: manufacturing processes, fabrication, fit-up, shop work, product development, rapid prototyping, 3D printing. **Technical Communication**: technical writing skills, project documentation, engineering drawings, presentations, communication skills. **Problem Solving**: troubleshoot mechanical systems, critical thinking, problem solving, detail-oriented analysis, collaboration, mentor-style peer support. **CAD & Analysis**: SolidWorks, NX, CATIA V5, FEA, engineering principles, basic automation, field work assessments, safety standards. **Programming**: Python, MATLAB.

Languages: French (native), English (TOEFL iBT 91), German & Italian (conversational).