

# ANDREA ESPOSITO

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## EXPERIENCE

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### TESLA

**Senior Technical Program Manager, Optimus and Charging.** Palo Alto, CA

July 2023 – July 2025

#### Optimus Hand

- Coordinated mechanical design team in the development of Gen4 hand: 22 DOFs, tendon actuation, tactile sensors.
- Informed the development of Gen5 hand and forearm, translating AI team needs into actionable hardware specs.
- Assessed required hand dexterity on S/X assembly line vs robot capabilities, guiding 2025 factory deployment strategy.
- Oversaw DOE addressing early tendon failures, extending 100x hand life (from 16h to multiple months of operations).
- Cut assembly time 90%, working with mfg to reduce # of components, electrical connections, and threading operations.
- Participated in weekly reviews with Elon Musk and VPs, occasionally presenting hand status updates.

#### Charging Technologies

- Oversaw entire direct materials supply chain for all charging products at Tesla. Responsible for supplier selection and industrialization during product development, and for supply quality and continuity during production.
- Played a key role integrating Wiferion (now Tesla Black Forest), an acquired startup developing wireless charging.
- Ensured successful product launches by creating and maintaining project timelines, identifying and mitigating risks, while coordinating the supply chain team's work based on cross-functional priorities and available resources.
- Products shipped: Wireless Charging (Cybercab), Optimus Charger, V4 Supercharging, Semi Megacharger.

### GE AEROSPACE

*Rotational program in manufacturing operations (OMLP) from March 2020 to April 2022.*

**Production Manager, Gears Manufacturing.** Turin, Italy

July 2021 - Apr. 2022

- Managed production on high-mix machining line. Supervised 20 production associates, tasked mfg engineer and QE.
- Improved output, efficiency, and cost. Increased productivity 15% through people leadership and technical solutions.
- Developed algorithm suggesting production mix based on WIP position and demand. Raised on-time-delivery by 30%.

**Technical Program Manager, Advanced Manufacturing Engineering.** Turin, Italy

Nov. 2020 - July 2021

- Coordinated design and manufacturing engineers streamlining legacy gears production process (project "Gear 2.0").
- Eliminated 25 days' worth of processes, reducing wip inventory (45%) and labor cost (10%) while improving yield.
- Successfully navigated technical difficulties and conflicts combining communication and problem-solving skills.

**Lean Manufacturing Engineer, Materials Acceptance.** Naples, Italy

Mar. 2019 - Nov. 2020

- Streamlined materials inspection, reducing inventory by \$7M through digital initiatives and stakeholders' engagement.
- Led the introduction of a new SAP module to further improve visibility and control over inbound materials.

## EDUCATION

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, MA

2022 - 2023

**MS, Industrial Engineering (Supply Chain Management), GPA: 4.9/5**

POLYTECHNIC INSTITUTE OF TURIN, Turin, Italy

**MS, Mechanical Engineering, GPA: 104/110**

2016 - 2018

**BS, Mechanical Engineering, GPA: 99/110**

2013 - 2016

## SKILLS & PERSONAL INTERESTS

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**Project Management:** Lean Six Sigma Green Belt, Jira, Confluence, MS Project.

**Mechanical Engineering:** CAD and structural analysis (Certified SolidWorks Professional), GD&T, APQP/PPAP.

**Talking to people:** native Italian, fluent Spanish, basic French.

**Talking to machines:** Python, SQL, HTML/CSS.

**Community:** Started and led a Brazilian Jiu Jitsu club at MIT which succeeded far beyond my wildest expectations.