

# Carlota Champalimaud

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## EDUCATION

**Cornell University**, College of Engineering, Ithaca, NY

**Expected May 2026**

Bachelor of Science in Mechanical Engineering

**Relevant Courses:** Statics and Mechanics of Solids; Thermodynamics; Multivariable Calculus; Differential Equations; Mechanical Synthesis; Linear Algebra, Dynamics; Automotive Engineering; Heat Transfer; Mechatronics

## PROFESSIONAL EXPERIENCE

**CSN – Companhia Siderúrgica Nacional**

São Paulo, Brazil, *Innovation Engineering Intern*

**June – July 2025**

- Evaluated 3 technical proposals for niobium and tantalum recovery considering extraction and cost efficiency
- Analyzed 3 hydrogen-reduction concepts for producing green steel from BOF steel slag briquettes
- Assessed the viability of building a 30,000 nm<sup>3</sup>/day biomethane plant for both in-house use and external sale
- Examined residual tension effects on steel sheet flatness, contributing to a 17% reduction of its rejection rate

São Paulo, Brazil, *Operations & Research Engineering Intern*

**July 2024**

- Researched hydrogen solutions, evaluating fuel cells and engines to cut CO<sub>2</sub> emissions by over 400 tons annually
- Analyzed over 200 BIL and IRA grants and applied for \$ 400M for the deployment of a small Modular Reactor

**Cimentos LIZ**

Minas Gerais, Brazil, *Operations & Maintenance Engineering Intern*

**May – August 2025**

- Assisted repair and realignment of clinker cooler on main furnace, resolving a 1-month production stoppage
- Coordinated gearbox overhaul on Mill III and welding repair of Mill IV separator during extended shutdowns

**Portugália Airlines**, Lisbon, Portugal, *Operations Engineering Intern*

**June 2024**

- Compared over 1000 flights to understand the 10% lower achievement rate for the Continuous Descent Approach compared to their brother airline, TAP, and reported on a solution reducing CO<sub>2</sub> emission by over 20kg per flight
- Participated in discussions with pilots to understand underperformance of the CDA in terms of human factors

**GOW – Capital Advisors**, Lisbon, Portugal, *Wealth Management Intern*

**June 2023**

- Researched and recommended 10 High Yield and 10 Investment Grade bonds to the Investments Team
- Back-tested 3 portfolios using Markovitz' model against the efficient frontier to understand their risk exposure

## LEADERSHIP

**Baja Racing Project Team**, Cornell University, *Drivetrain Team Member*

**October 2022 – Present**

- Worked with a team of 50 students to build and race an off-road vehicle at the Baja SAE Collegiate Design Series
- Designed and built firewall, CVT guard, and hubs using SolidWorks, aluminum fabrication, and carbon fiber lay-up
- Produced technical drawings for outsourced CVT guard welding, optimizing gasket pressure increasing tab spacing
- Validated CVT guard through thermal testing and ensured compliance with energy release safety standards

## CAMPUS INVOLVEMENT

**Cornell Women's Polo**, Ithaca, NY, *Varsity Athlete for Cornell's Polo Team*

**August 2023 – Present**

**Introduction to Mechanical Engineering**, Teaching Assistant (TA)

**August 2025 – May 2024**

**Mechanical Design**, Teaching Assistant (TA)

**January 2025 – May 2025**

**Calculus 1 and 2**, Course Assistant

**August 2023 – May 2024**

**Society of Women Engineers**, Member

**August 2022 – Present**

**Women of Aeronautics and Astronautics Organization**, Member

**August 2023 – Present**

**Cornell Car Club**, Member

**August 2022 – Present**

## SPECIALIZED SKILLS AND INTERESTS

**Programs:** Manual Machining, SolidWorks, MATLAB and Python (Beginner), Microsoft Office (Intermediate)

**Languages:** Portuguese (Native); English (Native); Spanish (Fluent); French (Fluent)

**Interests:** Horse Riding, Polo, Skiing, Volleyball, Formula 1, Cooking and Baking, Debating, Exploring New Restaurants