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João Pedro Camargo

EDUCATION

Virginia Polytechnic Institute and State University
Bachelor of Science, Mechanical Engineering – GPA: 3.96
Minor, Green Engineering

Expected May 2027
Blacksburg, VA

RELEVANT EXPERIENCE

The L.S. Starrett Company
Mechanical and Processes Engineering Intern

August 2024 - Present
Athol, MA - Mt Airy, NC

- Conducted process analysis with Oracle and Noetix to evaluate outsourcing feasibility of sub-components, identifying cost savings through labor reduction, rework elimination, and process simplification.
- Led replacement of outdated chemical etching with femtosecond laser, validating accuracy/capacity and supporting CapEx proposal projecting \$1M+ in annual savings.
- Co-led technical investment proposals to leadership and private equity board, presenting ROI, environmental impact, and reliability improvements.
- Developed SOPs and led training on automated vision inspection systems; created master inspection programs enabling CNC-based verification to ± 0.0002 ".

The L.S. Starrett Company
Mechanical Engineering Intern

May 2024 – August 2024
Athol, MA

- Performed root-cause analysis of product failures via mechanical testing and data interpretation, driving corrective actions for high-precision components.
- Designed and prototyped custom fixtures, nozzles, and robotic grippers using SolidWorks and SLA 3D printing, supporting automation and testing.
- Enhanced safety and ergonomics on 900-ton mechanical presses by implementing pneumatic doors and dual-actuation controls aligned with OSHA guidelines.

SEAD Lab – Virginia Tech
Undergraduate Researcher

September 2025 - Present
Blacksburg, VA

- Conduct research on probabilistic modeling and machine learning for measurement uncertainty in automated vision inspection systems.
- Developed synthetic datasets simulating aleatoric noise and setup bias to study false reject/accept rates and their cost implications.
- Investigate decision-making frameworks to reduce scrap/rework costs and improve inspection reliability, bridging statistical methods and ML approaches.

ORGANIZATIONS & LEADERSHIP

Tau Beta PI – Engineering Honor Society
Member at Virginia Beta Chapter at Virginia Tech

December 2024

Junior Tennis Player & Assistant Coach

February 2019 – Present

Former international junior tennis athlete; trained six days a week and competed in elite global tournaments including Les Petits As (Paris); coached youth players; representing Virginia Tech on the Tennis Club team.

SKILLS

Languages: Portuguese (Native), English (Bilingual), Spanish (Full Professional)

Software & Tools: SolidWorks, PreForm, Microsoft 365, Oracle ERP, Noetix, Keyence Vision Systems

Manufacturing & CAD: CNC Vision Programming, Mechanical Drafting, Process Troubleshooting, SOP Development, Turning, Lathes, Presses, Casting, Tempering, Welding

Programming Languages: C++, MATLAB, Python