Blase Londoño

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Education

University of California, San Diego, BS in Mechanical Engineering   Expected June 2027

- GPA: 3.96/4.00
- **Coursework:** Statics, Dynamics, Vibrations, Material Science, Linear Circuits, Thermodynamics, Fluid Mechanics, Signals and Systems

Experience

Mechanical Team Member, UCSD Yonder Dynamics – La Jolla   Oct 2025 – Present

- Designed and manufactured new wheel hubs for pneumatic wheels
- Form-fitted hub curvature to wheel in Onshape, wood-lathed epoxy resin-layered carbon fiber mold, employed vacuum bag carbon fiber layup, routed clearance holes using CNC mill
- Reduced hub weight by 50%

Electrical Team Member, UCSD Yonder Dynamics – La Jolla   Oct 2024 – Oct 2025

- Redesigned two-layer rover power distribution PCB.
- Built custom schematic and layout in Altium Designer, added new fuse blowout indicator lights, employed polygon pours and trace thickness specifications for proper thermal management.
- Reduced PCB footprint by 20%.

Projects

Robot Competition Project   Mar 2025 - June 2025

- Designed and fabricated a ring-collecting robot with 28" vertical extension
- Created rack-and-pinion mechanism through laser-cut acrylic walls and gears, 3D-printed shafts bent sheetmetal base and drill-pressed tap and clearance holes
- Developed complete CAD model using both Autodesk Fusion360 and AutoCAD

LSTM Pirouette Recognition Project   Aug 2024 - Sept 2024

- Developed custom LSTM neural network in MATLAB to classify pirouette movements from IMU time-series data.
- Processed multi-dancer dataset and implemented complete training pipeline.
- Documented methodology in technical paper with faculty guidance, achieved >95% classification accuracy

Skills

Manufacturing: CNC Machining, Manual Machining, Wood Lathe, Laser Cutting, 3D Printing, Composite Materials, Soldering, Sheet Metal Fabrication

Software: Autodesk Fusion 360, AutoCAD, Onshape, Altium Designer, MATLAB