

# RAMESES MENDOZA

## UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

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### EDUCATION (GPA: 3.46)

#### GRAINGER COLLEGE OF ENGINEERING, 2027

BS in Mechanical Engineering, James Scholar

#### GIES COLLEGE OF BUSINESS, 2027

Minor in Business

Expected Graduation: **May 2027**

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### EXPERIENCE

#### MACHINIST

Illini Pullers | Urbana, IL

September 2025 – Present

- Received mill training to perform facing, end milling, drilling, counterboring and tapping to +/- .003 inch tolerances on aluminum and steel parts.
- Received lathe training to perform facing, turning, chamfering, drilling, boring and tapping to +/- .003 inch tolerances on Aluminum and Steel parts.
- Supervising new members interested in machining and guiding them through making their first part.

#### SPHENIX RESEARCHER

UIUC Nuclear Physics Group | Urbana, IL

Jun 2022 – Jul 2022

- Used Python to discover, solve and visualize an inconsistency in the energy readings between the 6000+ blocks of the sPHENIX Detector's electromagnetic calorimeter.
- Constructed a final deliverable detailing findings and presenting adjustments to the Research Group, increasing the accuracy of the machine.

#### ELECTRIC BICYCLE CONSTRUCTOR

Independent Project | Elmwood Park, IL

Sep 2020 – Mar 2021

- Designed, built and tested an electric bicycle using OTS parts (12v motorcycle batteries, 500W DC motor, 25H sprockets, steel sheet metal, potentiometer, etc.).
- Calculated necessary power and torque needed to carry itself and rider at 15 mph.
- Manually machined custom metal augmentations, then welded them to a recycled frame.
- Cut, stripped and routed cables to shrink profile and increase aesthetic appeal.



### CONTACT

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### RELEVANT COURSES

- Engineering Materials
    - Property Testing
    - Fracture Predictions
    - Steel Metallurgy
  - Human-Centered-Design
  - Design For Manufacturability
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### SKILLS

- CAD (Fusion 360)
- Communication (Electronic, Telephone)
- Computer Technology
- Data Analysis
- Electronic Repair
- Microsoft Suite (Excel, Word, PowerPoint)
- Manual Milling
- Manual Turning (Lathe)
- Minute Taking
- Parliamentary Procedure (RONR)
- Python (Matplotlib, Numpy, Pandas, Sympy)
- Radio Transmission (Amateur Technician)
- Soldering
- Welding
- Writing (Reports, Emails, Letters)
- Electronic Modification