

# Wilbur Acharya

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## EDUCATION

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**The University of New Orleans**

Cumulative GPA: **3.9/4.0**

**Bachelor of Science in Mechanical Engineering**

Graduation Date: **May 2023**

**Minors in Software Engineering and Mathematics**

Homer-Hitt Scholarship (Full-Ride); ASME Petroleum Division Scholarship; Tau-Beta Pi Scholarship

## EXPERIENCE

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**Mechanical Engineering Intern**

**May 2022 – Aug. 2022**

Bayer U.S

Luling, LA

- Led operator rounds automation project for shifting from checklists to a tablet capable of automatically tracking equipment health and providing feedbacks for predictive maintenance of centrifuge equipment worth \$6 million
- Analyzed 5 production units' P&IDs for identification of process safety materials per OSHA/EPA compliance
- Automated merging and migrating of engineering spec sheets using Python, reducing 100s of manual hours

**Mechanical Engineering Co-op**

**June 2021 – Dec. 2021**

Bayer U.S

Luling, LA

- Created global training materials and trained 5 site operators in using Asset Performance Management software
- Assisted engineers and vibration technicians for controller setup and installation of 105 AMS vibration monitors
- Supported CAD drawings migration to Autodesk Vault; inspected specifications and multi-million project bids

**Research Intern**

**Jan. 2021 – Dec. 2021**

Energy Conversion and Conservation Center (ECCC)

New Orleans, LA

- Conducted study on superhydrophobic surfaces to achieve up to 10 times more heat transfer inside paper dryers
- Modeled industrial rotating cylinder dryer on SolidWorks for scaled down prototype design and experimentation
- Coated dryer with 5 hydrophobic coatings, and analyzed their susceptibility to boiling temperatures up to 105 °C

**Network Technician**

**Nov. 2019 – June 2021**

The University of New Orleans

New Orleans, LA

- Maintained, configured, and provided network support on-campus using Cisco and Ruckus Systems
- Swapped more than 1000 connections, 50 switches and 48 access points to increase network efficiency by 25%
- Conducted firmware/controller updates and maintained scheduled backups of more than 100 switches and APs

## PROJECTS

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**Four-Bar Linkage Mechanism**

- Designed a four-bar linkage mechanism capable of traversing three points in a sheet of paper in order
- Conducted Grashof's criterion analysis for rotation feasibility, and used MotionGen and SolidWorks for mechanism design and path simulation
- Operated CO<sub>2</sub> laser cutter for smoother surface finish of the parts and assembled them on 0.5" x 20" x 12" board

**Paper Dryer Siphons**

- Designed an experimental prototype of paper dryer to study flashing phenomena and air-water flow inside siphons
- Optimized the experiment and achieved 50% reduced energy consumption using compressed air instead of steam
- Acknowledged in the paper, "**Experimental Study of Void Fraction Effect on Flow Continuity in A Siphon**" published by the American Society of Thermal and Fluids Engineers (ASTFE)

**Litter-Bot Design**

- Worked with four team members to build a robot tasked to pick up items and dump them in separate bins
- Designed and 3-D printed various 4wd robot chassis using FDM printers for economical and rapid prototyping

## SKILLS

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- **Engineering:** SolidWorks, Fusion 360, AutoCAD, Autodesk, MotionGen, GE APM, AMS Machine Works
- **Languages:** Java, Python, C++, JavaScript, HTML, CSS, Vue.js
- **Technical:** 3-D Printing, Laser-Cutting, Band Saw, Lathe, Wire Brush, Angle Grinder, Drill Press