

VICTORIA (TORI) JOSHI

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EDUCATION

Rice University, Houston, TX · *Cum Laude Honors (GPA: 3.8/4.0)*

May 2020

B.S. in Mechanical Engineering; Minor in Engineering Design

Relevant Courses: Introduction to Engineering Design, Engineering Design Studio, Prototyping & Fabrication, Introduction to Robotics, Design of Mechatronic Systems, Needs Identification & Implementation, Elements of Algorithms & Composition

INDUSTRY EXPERIENCE

ABB (LEAD Engineering Rotational Development Program)

July 2020 - Present

CSSR Engineer (Consumer Services & Segment Robotics) (LEAD Rotation #3) · Alpharetta, GA

November 2021 – Present

- Developing cutting-edge robotic cell for depalletizing & singulating 30+ packages/minute from multiple infeed sources
- Preparing technical drawing packages, buying components, & running Factory Acceptance Tests for 3rd-party fabricators
- Establishing new facility in Georgia by implementing robotic demos, shipping logistics, and team building infrastructure

OEM Sales Engineer (LEAD Rotation #2) · San Francisco, CA

March 2021 – November 2021

- Expertise in managing mdm voltage sales (\$250K / 65% growth YTD) while transitioning MV parts to ABB sales operations
- Devised energy storage business development strategies with 40% response rate; replicated as best practice nationwide
- Executed Inside Sales projects: SPA consolidation, sales credit reporting, & customer feedback improvement documents
- Designed ABB's Instagram campaign to highlight incoming LEADers; increased engagement ~4x over preceding posts

Advanced Manufacturing Engineer (LEAD Rotation #1) · New Berlin, WI

July 2020 – February 2021

- Led project to move 2 assembly lines (200+ parts, torque tools, hardware, & racking) to maximize production capacity
- Analyzed Kanban utilization data to adjust bin sizes & TATs to eliminate shortages for 1650+ parts on 10+ assembly lines
- Compiled weights & dimensions for 7300+ products to expedite shipping method selection & quote generation processes
- Designed ABB's Career Fair Booth for WE20 Virtual Conference; taught hiring managers how to utilize vFairs software

Rockwell Automation, Inc.

May 2019 – August 2019

Global Manufacturing Engineering Services Intern · Twinsburg, OH

- Completed Lean Six Sigma Yellow Belt project to analyze & implement ideal process flow for Functional Board Test area
- Compiled part routing, machine utilization, and equipment risk analysis for 30+ materials processed in Utility work cell
- Led team of 6 interns to research & pilot a resource database to facilitate sharing equipment between Rockwell labs

Daikin Industries, Ltd.

May 2018 – August 2018

Design Engineering Intern · Waller, TX

- Compiled details from BOMs to create simulation files for 25+ new & existing evaporator and condenser products
- Calibrated and analyzed simulations of light commercial air conditioning & heat pump refrigeration system efficiency
- Identified and recommended 6 material recycling programs to save/rebate ~\$269K annually in waste management

ADDITIONAL PROFESSIONAL EXPERIENCE

National Aeronautics & Space Administration

August 2019 – May 2020

Capstone Design Project Team Lead · Houston, TX

- Optimized existing International Space Station components for loads associated with use in microgravity environment
- Designed user-friendly database to store part files for astronauts to access and manufacture on deep space missions

Rice University Mechatronic and Haptic Interfaces Lab

September 2018 – May 2020

Undergraduate Researcher · Houston, TX

- Developed instrumented human hand mannequin to improve accurate testing of assistive exoskeleton robotic gloves
- Fabricated physical components for research experiments via 3D printing, laser cutting, and metal machining processes

Rice Center for Engineering Leadership

September 2017 – May 2020

Communication Coach & Coordinator · Houston, TX

- Mentored 50+ students to strengthen oral & visual presentation skills for academic, poster, & slideshow presentations
- Corresponded with professors, coaches, & students to organize assignment details and coordinate 40+ coaching sessions

Oshman Engineering Design Kitchen

September 2017 – March 2020

Laser Cutter Lead · Houston, TX

August 2019 – March 2020

- Organized and led 9 interactive workshops to teach basic Adobe Illustrator and laser cutting skills to 60+ students
- Researched, wrote, & designed visuals for facility's instructional guide to use & care for newly acquired laser cutter

Lab Assistant · Houston, TX

August 2017 – August 2019

- Guided 30+ engineering teams in using laser & plasma cutters, 3D printers, and CAD to develop prototyping solutions
- Designed and installed safety, informational, and sponsorship signage to display critical information to facility patrons

SEED (Summer Experience in Engineering Design) Intern · Houston, TX

June 2017 – July 2017

- Collaborated with students from Brazil & Malawi to design & build okapi enrichment device for Houston Zoo in 5 days
- Built portable & adjustable stand to support amputees' full weight for 10+ minutes while being fitted for prosthetic legs

ACTIVITIES & LEADERSHIP

ABB Encompass Pride

November 2021 - Present

Programming Chair · Virtual

- Coordinating 12+ events in 2022 to facilitate education on LGBTQ+ issues & networking between members nationwide
- Developing at-home Pride Activity Boxes containing supplies & memorabilia for inclusion in virtual Pride Month events

American Society of Mechanical Engineers (Rice University ASME Chapter)

April 2018 – May 2020

Historian · Houston, TX

- Visually documented 14 ASME-sponsored activities, including chapter meetings, alumni receptions, and social events
- Quickly edited and curated photos to manage chapter Facebook page and website to promote ASME's online presence
- Organized 2 tours of Rice University's steam tunnels to teach 20+ students real-life applications of thermodynamics

Rice University Theatre

January 2017 – May 2020

Director, Executive Producer, & Production Manager · Houston, TX

- Directed 24 actors in rehearsals & headed creative leadership to stage Wiess College's musical tradition *Hello Hamlet!*
- Advised director, designed production posters, and constructed set for Martel College's production *The Last Five Years*
- Directed 10 actors & coordinated 4 rehearsals for Rice Players' staged reading of original musical *The History of Flight*

Rice Art + Engineering

August 2016 – April 2019

President, Project Manager, & Public Relations Rep · Houston, TX

- Designed and coded 2 sound- and motion-activated interactive digital displays for Rice KTRU Outdoor Show music festival
- Produced 3 outreach events with local partners to promote STEAM to kids via patron-assembled electric doodling robots

Dream: Achievement through Mentorship

August 2016 – May 2017

Student Mentor · Houston, TX

- Mentored local middle and high school students to complete engineering challenges and educate them about college
- Hosted 2 interactive DREAM Days at Rice University to teach high school students about engineering applications

PUBLICATIONS

S. N. Yousaf, Joshi, V. S., Britt, J. E., Rose, C. G., and O'Malley, M. K., "Design and Characterization of a Passive Instrumented Hand", ASME Letters in Dynamic Systems and Control, vol. 1, 2021.

HONORS & AWARDS

Distinction in Research and Creative Work

May 2020

Lean Six Sigma Transactional Yellow Belt Certification

August 2019

Foundation of the Association of Energy Engineering Scholarship Recipient

August 2019

Phil Layton Award for Excellence in the Arts

January 2019

SKILLS

Software: IRC5 Programming I, Robot Studio, ABB Empower, ABB Spine, ABB eConfig, AutoCAD, SolidWorks, Fusion360, MOCHA, SAP, VapCyc, CoilDesigner, MATLAB, Python, Adobe Photoshop & Illustrator, Apple iMovie, Microsoft Office Suite

Prototyping: Laser/plasma cutting, 3D printing, wood tools, soldering/electronics, CNC routing, welding, molding/casting