Connor Nail

Chandler, AZ | 480-749-5680 | connor.nail@cox.net

PROFESSIONAL SUMMARY

A highly motivated, analytical, and technical Robotics & Autonomous Systems graduate student enrolled at Arizona State University pursuing an opportunity to continue to learn, implement skills, and grow as a professional. Demonstrated background in the CMP process of semiconductor manufacturing with experience in reliability testing, physics simulations, and web development. Experienced using many programming languages to aid in data analysis, system operations, and process statistics.

SKILLS & COMPETENCIES

- Mechanical Engineering
- Software Engineering
- Process Engineering
- Data Collection & Analysis
- Project Management
- Team Leadership
- Robotics & Autonomous Systems
- Machine Learning
- AR/VR Development

Technical: Java, Python, C#, JavaScript, VBA/VBS, MATLAB, JMP/JSL, ROS, MoveIt, CAD, Unity, React, Git
Simulations: Thermal, Structural, Dynamic, Fluid, Random Shock & Vibration

EDUCATION

Arizona State University - Tempe Campus | Tempe, AZ — Expected Graduation: Dec 2022
Master of Science in Robotics & Autonomous Systems (GPA: 4.0/4.0)

Arizona State University - Tempe Campus | Tempe, AZ — Graduated: Dec 2021
BSE in Mechanical Engineering (GPA: 4.0/4.0 - Summa Cum Laude)

RELEVANT EXPERIENCE

Arizona State University Luminosity Lab | Tempe, AZ — Dec 2019 - Current
Student Researcher

- 2022 NASA Big Idea Challenge Finalist:
  - Designed a 12 degree of freedom legged robotic lunar rover system using Solidworks
  - Led the team in Ansys simulations for system design and physical test validation
  - Contributed to the implementation of a semi-autonomous control scheme utilizing ROS
- 2020 NASA Big Idea Challenge Finalist:
  - Designed a lunar lander probe launching payload using Solidoworks to collect data from the permanently shadowed regions of the moon
  - Led the team in Ansys physical simulations to analyze a lunar probe and launcher system simulations that included random shock and vibration, transient thermal, drop testing, and static structural
  - Presented at the 2020 NASA Big Idea Challenge Forum and the 2021 Simulation World Conference
- 2021 Gaia:
  - Developed a confidential AR data visualization application in Unity for a large food and beverage company
  - Created a HoloLens application alongside a desktop version to mirror its functionality

Intel Corporation | Chandler, AZ — Apr 2020 - July 2021
Student Process Engineer - 14 nm CMP

- Worked with an interdisciplinary team of engineers to maintain a fleet of CMP tools for 14 nanometer semiconductor manufacturing
- Utilized SQL and JMP programming to query and analyze manufacturing data
- Managed multiple CMP tools and worked to dispositioned product to ensure customer quality standards were met

Developed the Mobile Application ADD-ictive — Oct 2018 - Oct 2019
Personal Project

- Utilized Unity, C#, and multiple Apple development tools to develop a puzzle game for mobile devicesvir

NXP Semiconductors | Chandler, AZ — May 2019 - Aug 2019
Reliability Testing Intern

- Used CAD software to aid in the design of pressure vessels for HTOLP testing on TPMS parts
- Assembled and prepared an RF HTOL test chamber for use
- Performed routine maintenance on THB test chambers

ADDITIONAL EXPERIENCE

Self-Employed | Chandler, AZ Nov 2016 - Current

Piano Instructor

- Instruct students in learning to play the piano, understanding music theory, and interpreting sheet music

Chandler-Gilbert Community College | Chandler, AZ Aug 2017 - Mar 2020

Math & Physics Tutor

- Aided in student understanding of mathematics and physics course content through Differential Equations and Physics 2
- Communicated expectations and curriculum requirements to reinforce classroom goals and progress student's knowledge

AWARDS & ACKNOWLEDGMENTS

- Solidworks CSWP Certification, Aug 2019
- Robotics Awards | VEX Team #8800 and FRC Team #1492, 2016 - 2018
  - 2016 and 2017 FRC State Champion
  - 6-Time Excellence Award winner
  - One of five 2017 VEX World Design Award winners for best implemented and documented design process
- Moeur Award, 2021
- Ira A. Fulton Schools of Engineering Dean's List, 2018 - 2021
- Awarded New American University Scholarship President's Award, 2018 - 2022

ADDITIONAL INFORMATION

- Mentor to FRC Robotics Team 1492
- Volunteered at ASU Polytechnic 2020 VEX Robotics Competition
- Eagle Scout BSA Troop 923 - Participated in 100+ hours of community service