

## EDUCATION

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- **Saint Louis University** St. Louis, MO  
*Master of Science in Engineering; GPA: 4.00* *Jan. 2017 – Exp May. 2022*
- **Southern Illinois University of Edwardsville** Edwardsville, IL  
*Bachelor of Science in Mechanical Engineering; GPA: 3.89* *Aug. 2012 – May 2016*

## EXPERIENCE

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- **The Boeing Company** Hazelwood, MO  
*Software Engineer* *Feb. 2019 - Present*
  - **Autonomy/AI:** Designed and developed for an internal AI gym along with writing agents and behaviors that operate within it.
  - **Constructive Simulation:** Lead efforts to bring maritime simulation to the industry standard simulation tool AFSIM.
  - **Real-time Simulation:** Developed capabilities for a portfolio of real-time RHEL Linux training platforms.
  - **DevSecOps and CI/CD:** Implemented containerized solutions for a variety of use-cases including local development environments and Jenkins server.
- **Saint Louis University** St. Louis, MO  
*Graduate Research Associate* *Jan. 2017 - Feb. 2019*
  - **Academic Research and Publications:** Research grant funded position to lead research relevant to NSF Cyber-Human Systems programs which included fields such as Robotics, AI, and Machine Learning.
  - **Robotics:** Designed, machined, and programmed a 5-DOF anthropomorphic arm manipulator for a two wheeled telerobot that was actuated and controlled to mimic the movement of an operator's arm.
  - **Perception Systems:** Leveraged video data from a Microsoft Xbox Kinect to implement a inverse kinematic solutions that determined operator arm pose for a telerobotic arm.
  - **Supervised Learning:** Implemented Tensorflow LSTM networks to learn tactile features on robotic platforms.
  - **Reinforcement Learning:** Explored using Reinforcement Learning algorithms to control the telerobotic platform using rewards to guide the robot's state rather than much costlier alternatives found in Modern Control techniques.
- **Dynamic Controls** Maryland Heights, MO  
*Controls Engineer* *Jan. 2016 - Sep. 2017*
  - **HVAC Control:** Implemented complete automation solutions necessary for closed-loop PID control of commercial HVAC systems.
  - **HMI:** Programmed custom GUI applications to allow customers to interface with PLC control logic parameters.
- **Emerson Climate Technologies: White Rodgers** Florissant, MO  
*Co-op Engineer in Mechanical and Sustaining Engineering* *Jan. 2015 - Aug. 2015*

## PUBLICATIONS

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- **A Curved Port Delivery System for Laser Interstitial Thermal Therapy of Brain Tumors:** 2019
- **Design of a Lightweight, Ergonomic Manipulator for Enabling Expressive Gesturing in Telepresence Robots:** 2018
- **Motion and Deformation of a Water Droplet Under the Influence of an Electric Field:** 2014

## CERTIFICATIONS

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- **DevSecOps for Developers:** Saint Louis University
- **Software Engineering and Architecture:** Saint Louis University (Expected in Dec. 2021)

## PROGRAMMING SKILLS

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- **Languages:** Python, C++, C, Java, Latex
- **Technologies:** Docker, Tensorflow, Git, Jenkins, ROS