

ADITYA VAISHAMPAYAN

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PROFESSIONAL EXPERIENCE:

Computer Vision Engineer - Intern (SimInsights Inc., Lake Forest, CA)

July 2020 – Nov 2020

- Worked on Nvidia Jetson to make an on-device ML software to do edge inference for human activity recognition task.
- Used Isaac Sim Unity 3D Engine for synthetic data generation on novel objects, and DetectNetV2, YOLOV3 architectures to perform object detection on real life objects obtaining mAP of 95%.
- Implemented domain randomization to reduce the synthetic to real gap while generating synthetic dataset in Unity.
- Helped in developing a pipeline in C++ to detect pose of a 3D object in point cloud using Azure Kinect RGB-D camera.
- Implemented a Data Version Control pipeline using Amazon S3 and Git for sharing data and model files across all users.
- Researched various techniques to implement Few Shot Object Detection, using FasterRCNN and PyTorch.

Automation and Control Engineer - Intern (Tesla Inc., Fremont, CA)

June 2019 – August 2019

- Investigated and implemented from scratch a Continuous Integration and Continuous Delivery (CI/CD) pipeline in Python for FANUC robots, following software development cycle.
- Developed features such as trigger based code backup, remote code push, static analyzer, control flow tool.
- Initiated virtual commissioning for auto-trimming Tesla solar panels, using a FANUC robot and Beckhoff PLC in Siemens Process Simulate
- Performed thorough market research for the project of the teach pendent-less robot programming. Onboarded a new vendor and orchestrated the project with them for deployment.
- Commissioned Siemens & Beckhoff PLCs, IPCs. Also performed visual inspection of 40+ KUKA and FANUC robots.

Robotics Engineer - Intern (Keepsake Automation LLP, Ahmedabad, IN)

April 2018 – May 2018

- Independently completed MIG welding of an air control system casing using a KUKA KR 16-2 industrial robotic arm. Software Version KSS 8.x KUKA Robot Controller 4 (KRC4).
- Helped in commissioning two KUKA KR 16-2 robots. Also helped in setting robot cells and mounting end of arm tooling such as MIG, TIG guns on the robots.

Controls Engineer - Intern (Siemens Ltd., Vadodara, IN)

May 2017 – June 2017

- Independently wrote a program for automating lube oil system of a steam turbine using Ladder Logic.
- Also helped in making panel layouts and schematics. Also, compiled a 30-page report of my training on the steam turbines and presented it before senior engineers.

Engineering Trainee (Design Tech by Siemens)

Feb 2017 – June 2018

- Completed industrial training on Siemens PLC S7-1200 and learned basics of process instrumentation.
- Developed various programs on PLC software using Ladder Logic and Functional Block Diagram (FBD)
- Integrated PLC and HMI to obtain a graphical representation through PROFIBUS and PROFINET.

TECHNICAL SKILLS:

Frameworks and Libraries: Nvidia Isaac SDK, Nvidia DeepStream, Unity3D Engine, PyTorch, TensorFlow, Keras, OpenCV, PCL, Scikit Learn, Pandas, Matplotlib, NumPy, ROS, Gazebo, V-REP, Rviz, GIT, MATLAB, Simulink Control Systems and Robotics System Toolbox

Programming: Python, C++, C#, KRL (Kuka Robot Language), IEC 61131 (Ladder Logic and STL)

EDUCATION:

Master of Engineering in Robotics

Aug 2018 - May 2020

University of Maryland, College Park, MD

Bachelors in Instrumentation and Control Engineering

Aug 2014 - May 2018

L.D. College of Engineering, Ahmedabad, India