Kadyn Martinez
Robotics Software Engineer

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EDUCATION

Computer Science
San Francisco State University

07/2015 - 05/2017   *San francisco, CA*

Computer Science
Chico State University

01/2022 - Present   *Chico, CA*

Courses
- Robotics
- Machine Learning

WORK EXPERIENCE

Computer Vision / Robotics Software Engineer
Simbe Robotics

10/2016 - 07/2020   *San Francisco, CA*

Robotics as a Service developing solutions for retail analytics and automation

Achievements/Tasks
- Integrated modified versions of models into pipeline deemed to be successful when trained on simbe domain datasets.
- Iterative improvements to models and detection workflow, decreasing computation time by 80% with minimal loss in accuracy.
- Created evaluation service to compare models and weights agnostically on key metrics including time, accuracy, and resource usage to ensure > 90% accuracy for most use cases.
- Created tooling for synthetic data creating to supplement limited data availability.
- Developed ROS packages in C++ and python currently in use on production robots.
- Developed ROS package for monitoring robot health via sensor feedback. Robot responded with HRI behaviors in response to feedback.
- Developed robust feedback loop for changes in our pipeline to prevent unknown failure at scale.
- Created flask services to process pipeline output and generate deliverables so customers can get their output immediately as it was available.

SKILLS

C++   Python   ROS   ROS2   OpenCV   Git

Linux   Docker   Keras   C#   Unity

PERSONAL PROJECTS

W357: Mech warfare combat quadruped
- Designed hardware from scratch in Fusion360 and 3d printed iterating on failure points as build progressed.
- Developed packages to enable dual pilot mechanisms from 3 locally distributed computers.

Logibot: Last mile logistic robot for campus oriented delivery
- Outdoor navigation robot developed in ROS2 and ROS1 as needed.
- Customer focused product development cycles based on delivering a pizza to spots on campus.

CARA: Self driving RC Car
- Designed and built systems for a Self-driving RC car for use in DIY RoboCars competitions.
- Modified an existing RC car protocol to replicate it and control it via ROS.
- Implemented rudimentary lane detection.

ORGANIZATIONS

ACM SFSU (07/2015 - 05/2017)

Computer Animation and Game Design Club CSUC
 (01/2022 - Present)

INTERESTS

Cute Robots   Learning Languages

Competitive Video Games   Fighting Games

Game Development   3D Modeling