Sahit Chintalapudi

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Looking for an internship or research experience developing intelligent robots.

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY
BS in Computer Science
Expected May 2020 | Atlanta, GA
Concentrations in Theory and Intelligence
GPA: 3.95 / 4.0

SKILLS

Programming Languages:
Python, C++, Java
Tools:
Linux, ROS (Robot Operating System), Vim, LaTeX

COURSEWORK

COMPLETED
Introduction to Artificial Intelligence
Honors Probability and Statistics
Honors Design and Analysis of Algorithms
Second Course in Linear Algebra

FALL 2018
Machine Learning
Computer Vision

AWARDS

Sparkfun Autonomous Vehicle Competition 2018 - Best Collegiate Speed Demons Team
Google Games 2018-3rd Place
Sparkfun Autonomous Vehicle Competition 2017 - Autonomous Car Wars Winner
International Autonomous Robot Racing Competition 2017 - 3rd Place
Swamphacks 2017-Best use of ClarifAI
Swamphacks 2017-HackHarassment Award

LINKS

GitHub: **github.com/chsahit**
LinkedIn: **linkedin.com/in/sahit-chintalapudi**

RESEARCH

ROBOT LEARNING LAB | Researcher, Webmaster
April 2017 – Present

- Applying Gaussian Processes to perform motion planning online in dynamic environments.
- Used Matlab scripts to invoke the Gaussian Process Regression and wrote C++ code to quickly perform A* search and generate spanning trees for planning.
- Experimenting with Model-Free Reinforcement Learning algorithms to better exploit the vehicle dynamics of a high speed model car with PyTorch

SEARCH BASED PLANNING LAB | RI Summer Scholar
June 2018 - August 2018 | Carnegie Mellon University, PA

- Designing an on-demand heuristic function that speeds up motion planning using a provided homotopy class using ROS and C++ on a humanoid robot. The heuristic function sped up search by 30%
- Used ROS to generate the Inverse Kinematics of a humanoid robot.

HUMAN-AUTOMATION SYSTEMS LAB | Researcher
January 2017 – May 2017

- Choreographed a telepresence robot to be more expressive by modifying the motion profiles that controlled the robot with Java

PROJECTS

SEDANI - AUTONOMOUS RC CAR | Software Lead
November 2017 - Present

- Prototyped different deep network architectures in Keras for end to end learning of steering autonomous vehicles from images of the road.
- Designed new worlds in the Gazebo simulator to test the robustness of our deep end-to-end model

BIGOLI - AUTONOMOUS POWER RACING VEHICLE August 2017 – Present

- Used Hough Circles to identify the start signal for the race
- Modeled the robot in URDF (Unified Robot Description Format) to enable coordinate transformations with ROS's tf library.

BUZZMOBILE - AUTONOMOUS PARADE FLOAT | Project Lead
January 2017 – April 2018

- Integrated Gazebo, a robot simulator, with ROS so we could test in simulation using nodes written in C++
- Added Arduino firmware to engage and disengage brakes as well as read incoming commands over the serial line

MACARONI - AUTONOMOUS RC CAR | Software Lead
September 2016 – July 2017

- Implemented an SVM that detects the road in an image with OpenCV and Python
- Ported the vision software from ROS nodes to nodelets in C++ to drop computation time
- Developed the PID controller which acted as interface between the hardware and the high level AI on an Arduino.