Sahit Chintalapudi

sahitc.com schintalapudi@gatech.edu 908.887.4698 325414 Georgia Tech Station, Atlanta GA
Looking for an internship or research experience in Spring and/or Summer 2020.

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY
BS in Computer Science
Expected December 2019 | Atlanta, GA
Concentrations in Theory and Intelligence
GPA: 3.93 / 4.0

SKILLS

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

COURSEWORK

Machine Learning
Interactive Robot Learning
Computer Vision
Second Course in Linear Algebra
Honors Design and Analysis of Algorithms
Honors Probability and Statistics
Introduction to Artificial Intelligence
Robotics and Perception

AWARDS

President's Undergraduate Research Award - Grant Awarded
Google Tech Challenge 2019 - 1st Place
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**

EXPERIENCE

ROBOT LEARNING LAB | Undergraduate Researcher
April 2017 – Present | Georgia Tech, GA

- K. Kolur*, **S. Chintalapudi***, M. Mukadam, B. Boots, Online Motion Planning Over Multiple Homotopy Classes with Gaussian Process Inference, IROS. 2019
- Used C++, MATLAB, and the GTSAM toolbox to model the planning problem with a factor graph that adapted in real time to environment changes. In an environment with randomly moving obstacles, this algorithm reduced collision intensity by at least 37% compared to other approaches.

HUMAN-CENTERED ROBOTICS LAB | Research Assistant II
May 2019 - Present | University of Washington, WA

- Implemented a Jacobian-Based Full-Body Controller for the Fetch Robot to perform research on mobile manipulation with ROS and C++
- Researched Task Decomposition to facilitate high dimensional planning in the context of autonomous cleaning, advised by Dr. Maya Cakmak

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

- V. Ranganeni, **S. Chintalapudi** , O. Salzman, M. Likhachev, Effective Footstep Planning Using Homotopy-Class Guidance, (Under Review) Artificial Intelligence (AIJ). 2019.
- Developed C++ Software for a humanoid footstep planner which plans 16-128 times faster than the baseline approach in environments with many obstacles

VIASAT | Software Engineering Intern
May 2017 – August 2017 | Duluth, GA

- Built a full stack Django web application for visualizing sensor data. Used ZeroMQ for message transfers and PostgreSQL to manage data.
- Added additional FPGA queries to the C++ codebase running on ViaSat modems and displayed them with JavaScript and HTML

PROJECTS

ROBORACING: AUTONOMOUS RC CARS | Software Lead
September 2016 - October 2018

- Prototyped different deep network architectures in Keras for end to end learning of steering autonomous vehicles from images of the road.
- Managed a team of seven other developers, using GitHub issues to track team progress and coordinating with mechanical and electrical team leads
- Trained an SVM that detects the road in an image with OpenCV and Python
- Developed the PID controller which acted as in interface between the hardware and the racing AI on an Arduino
- Used the OpenCV Circle Hough Transform to identify the race start signal

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++
- Prepared Live Coding Demonstrations to illutrate the usage of ROS's Python bindings for new team members
- Added Arduino firmware to engage and disengage brakes as well as read incoming commands over the serial line