Pragatheiswar Giri

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EDUCATION

BE in Biomedical Engineering
PSG College of Technology
Cumulative GPA: 3.9 / 4.0

MS in Electrical and Computer Engineering Technology
Purdue University
Cumulative GPA: 3.9 / 4.0

PhD in Technology
Purdue University
Current GPA: 4.0 / 4.0
In Progress

COURSEWORK

GRADUATE

Bioinformatics
Advanced C Programming
Advanced C++ Programming
Data Analytics
Programming Robots with ROS
Introduction to Robotics
(Teaching Asst. MFET 248)
Electrical Energy Systems
(Teaching Asst. ECET 376)
Tribology
(Research Assistant)

SKILLS

PROGRAMMING

Over 2000 lines:
C • C++ • Python • Matlab
Over 1000 lines:
•ROS • Swift

FANUC Robot Programming • Yamaha Robot Programming • Machine Learning Libraries • Matlab

WET LAB

Protein and genomic data analysis.
•Plate-based Assays.
• Flow Cytometry. • Sample Preparation for quantitative Proteomics via LC-MS/MS.

CERTIFICATIONS

• Python Programming
• Machine Learning
• Neural Network and Deep Learning
• Deutsch 1

RESEARCH AND EXPERIENCE

COLLABORATIVE ROBOTICS LAB, PURDUE UNIVERSITY | Research Scholar

| Project 1

Worked with Dr. Richard Voyles in developing and optimizing a neuromorphic architecture for printable organic neurons used in a Soft Robotic Skin with zero negative weights constrain. I was majorly involved in developing the Neural Network algorithm and testing the electrical neurons. The ANN was physically implemented, tested and verified.

| Project 2

Built and Programmed a R/C race car to navigate the halls of a generated map at extreme speeds autonomously in a rally race. Utilized AMCL in ROS to acquire the IMU data and the Hokuyo LIDAR to localize ourselves in a known map and finished 3rd in KNOY 500 race.

SURGICAL ROBOTICS LAB, UNIVERSITY OF LEEDS | Research Intern

Worked with Dr. Pete Culmer and Dr. Micheal Bryant to Synthesis a Polymer Brush Surface, a polymer brush functionalised surface on a PDMS for Urinary Catheterisation. Work published at ICUR 2017.
Presented at International Conference for Undergraduate Research (ICUR) 2017

CAMARILLO LAB, PURDUE CENTER FOR CANCER RESEARCH | Bioinformatics Research Assistant

Working on a Chemotherapeutic Drug Delivery Enhancement method using Electric pulses for breast cancer cells. I optimized the electric field strength and pulse duration to increase the drug permeability in breast cancer cells. I performed multiple label-free quantitative proteomics studies on various drugs and analyzed over 30,000 proteins and genes to study the mechanism of action. Authored 4 publications with related bio-infomatics work.

SCHOOL OF MECHANICAL ENGINEERING,UNIVERSITY OF LEEDS | LISS Ambassador + Mechanical Engineering Intern

- 6 out of 250 applicants chosen to be a Leeds 222 Summer Intern 2017.

PSG HOSPITALS | Microbiologist Intern

- Worked with the microbiology department to design and develop a solution for counting the number of bacterial colonies and to develop an algorithm for increasing the efficiency for antibiotic susceptibility testing.

PUBLICATIONS

- Analysis of pathways in triple-negative breast cancer cells treated with the combination of Electrochemotherapy and Cisplatin.
- Cisplatin-based Electrochemotherapy Significantly Downregulates Key Heat Shock Proteins in MDA-MB-231-Human Triple-Negative Breast Cancer Cells
- Electrical pulse mediated Galloflavin delivery modulates key proliferation proteins - An Quantitative Proteomic study