SHAILJA

Graduate Student, UCSB

@ shailja@ucsb.edu | 6530 El Colegio Rd, Apt #3122 | Santa Barbara, CA | https://shailjasah.github.io/

INDUSTRIAL EXPERIENCE

Flipkart Internet Pvt. Ltd.

Software Development Engineer

Dec, 2016 - Aug, 2018 | Bangalore, India

- Developed the code to implemented the business logic for various features. Played a lead role in the order management system's migration to an improved version, handling a large amount of data.

GreyOrange Robotics

Software Development Intern

Jun, 2016 - Sept, 2016 | Gurgaon, India

Developed an algorithm to reduce the processing time of butlers.

RESEARCH EXPERIENCE

University of California, Santa Barbara

Electrical and Computer Engineering

Aug, 2018 - Present | Santa Barbara, CA

→ **Time-Inconsistent Planning. Mentor: Prof. Subhash Suri**

- Studying the graph-theoretic model of the time-inconsistent planning to explore ways to design tasks to motivate agents to reach designated goals.

→**Chromatic Shortest Path**

- Studied the hardness of the problem of finding a minimum weight path for a given source-destination pair and given color complexity. Developed the approximation algorithm with the performance bound of $O(\sqrt{(|V|)})$. Implemented the DP and greedy algorithms to analyze the performance.

University of Pittsburgh Medical Center

Visualization and Image Analysis Lab

Oct – Dec 2017 | Pittsburgh, PA

→ **Automated Segmentation Analysis Using High Resolution Ultrasound Imaging. Mentor : Prof. George Stetten**

- Developed the model of Descending Variance Graphs (DVG) for segmenting neurological structure of ultrasound images in both 2D and 3D spaces.

University of Washington

Computing and Software Systems Division

Sept – Dec 2016 | Seattle, WA

→ **Localization and Navigation of a Self Driving Tricycle, Elcano. Mentor : Prof. Tyler Folsom**

- Developed a fuzzy algorithm to estimate the position of a trike using GPS and dead reckoning. Also,developed an optical odometer for 2-D displacement measurement using 30×30 pixel image to track the trike's motion.

Indian Institute of Technology, Kharagpur

Bachelor's Thesis

2015-2016 | India

→ **Visual Navigation of Mobile Robots Using Monocular Vision. Mentor : Prof. Jayanta Mukhopadhyaya**

- Developed an algorithm to generate a complete map of the traversable region for a robot using monocular vision.

INTERESTS

Graph Algorithms, Design and Analysis of algorithms, Image Analysis

EDUCATION

MS in Electrical and Computer Engineering

University of California, Santa Barbara

2018 - Present

GPA: 4.0/4.0

B.Tech. in Electrical Engineering

Indian Institute of Technology, Kharagpur

2012 - 2016

TECHNICAL REPORTS

Descending Variance Graphs for Segmenting Neurological Structures
Shailja and George Stetten - PDF

Visual Navigation of Mobile Robots
Shailja, Soumabh Bhowmick, Jayanta Mukhopadhyay - PDF

Navigation and Localization of an Autonomous Tricycle
Shailja and Tyler Folsom - PDF

UW Bothell News | The Komo TV News

AWARDS

Big Ideas Finalist
Our team has been selected as a finalist in the 2018-2019 Big Ideas Contest organized by UC Berkley in the Connected Communities category.

Research fellowship
Received a fellowship of $7000 from the Amazon Catalyst in partnership with the University of Washington for my research at UW.

Silver award winner
Intra-college competition to develop plot to table converter software.

Undergraduate scholarship
From 2012-16, offered by IIT.

COMPUTER SKILLS

Python, C++, Java
C, HTML, Assembly Lang
Atmel Studio, Arduino IDE
Git, Proteus