

EDUCATION

Masters, Computer Science, Arizona State University GPA 3.92	<i>August 2017 - Present</i>
Bachelor of Technology, Computer Science & Engineering, India GPA 8.67/10	<i>July 2012 - July 2016</i>

TECHNICAL SKILLS & COURSEWORK

Languages:	Python, Java, C, C++, SQL, Html, JavaScript
Databases:	MySQL, SQLite
ML Technologies:	Numpy, OpenCV, Pandas, Scikit-learn, Matplotlib, Tensorflow
Coursework:	Foundations of Algorithm, Artificial Intelligence, Perception in Robotics, Intelligent & Assistive Robotics, Statistical Machine Learning

WORK EXPERIENCE

Software Engineering Intern Rockwell Collins Irvine, California	<i>May 2018 - August 2018</i>
<ul style="list-style-type: none">Designed and developed an Android application for IFE which auto-detected cast enabled monitors and played DRM protected media on it from personal devices without any internet connection. Technology Stack: Python, Java, Electron, Raspberry Pi, Android Studio	
Programmer Analyst Trainee Cognizant Technology Solutions Kolkata, India	<i>August 2016 - June 2017</i>
<ul style="list-style-type: none">Redesigned and debugged existing user validation & auditing system. Upgraded front-end code of the main application. Technology Stack: Java Server Faces, Html5, JQuery, SOAP API	

ACADEMIC PROJECTS

Roblocks: An End-to-End System for Programming Mobile Manipulator Robots Thesis	<i>Fall 2018</i>
<ul style="list-style-type: none">Developing a visual programming interface that will dynamically populate puzzle shaped blocks defining possible actions for a robot and allow users to write code for navigation and manipulation by connecting them instead of typing. Technology Stack: Java, Python, ROS, Gazebo, PDDL, Html5, JQuery, AJAX	
Anomaly Detection Statistical Machine Learning	<i>Fall 2018</i>
<ul style="list-style-type: none">Architected a hybrid model using five different machine learning models with weighted polling to detect component failures in the Air Pressure System of heavy Scania trucks. Applied various feature engineering methods to deal with inconsistent data. Technology Stack: Python, Pandas, Scikit-learn, Matplotlib	
Multi view 3D Object Reconstruction using Deep Neural Networks Robotics	<i>Spring 2018</i>
<ul style="list-style-type: none">Integrated ROS enabled 3D Recurrent Reconstruction Neural Network (3DR2N2) to generate the 3D shape of an object from 2D images and detected grasping poses on it. Technology Stack: Python, Numpy, Convolution Neural Network, Recurrent Neural Network	
Smart Video Surveillance System using Deep Neural Network & POMDPs Robotics	<i>Spring 2018</i>
<ul style="list-style-type: none">Utilized a deep object detection network (YOLO) to capture an object's movements in the current camera frame which then served as evidence to a Partially Observable Markov Decision model for visual servoing. Technology Stack: Python, Java, OpenCV, Convolution Neural Network	
Comprehensive implementation of AI methods in Pacman Gaming Environment AI	<i>Fall 2017</i>
<ul style="list-style-type: none">Implemented Pacman agent in an adversarial setting using DFS, BFS, UCS, A* search, Alpha-Beta pruning, Minimax, Value functions, model-based and model-free reinforcement learning algorithm. Technology Stack: Python, Tensorflow	

PERSONAL PROJECTS | GITHUB

Developing a voice enabled calling application (AIY VoiceKit, Python, Android).

Designed and developed a virtual math teacher that can ask and answer questions on basic addition, subtraction, multiplication, and division (AIY VoiceKit, Python).

Architected a Convolutional Neural Network to localize a phone in an image with a minimal amount of data to train on (training images = 130; Tensorflow, Python, Numpy, Matplotlib).

Devised a digit recognition model on MNIST dataset using Convolution Neural Network (Python, Numpy, Tensorflow).