

# ADARSH KESIREDDY

◇ +1(972)522-9653 ◇ kesireddy.adarsh.k@gmail.com

## SUMMARY

---

Experienced as an Application Engineer(Full Stack Web Developer, and Desktop application), Solution Engineer (with client interaction), and Design Intern Engineer. Experienced in researching and coming up with a solution to the given problem. Hands-on experience along with published work in Machine Learning topics: Artificial neural networks, Evolutionary algorithms, Multi-agent systems, Multi-objective optimization, Reinforcement learning, Flocking environment, Image processing, and Game theory.

## WORK EXPERIENCE

---

### Research Assistant

January 2020 - Currently working

Texas A&M University Corpus Christi

Corpus Christi, Texas

1. Developed a new multi-objective optimization technique, along with implementation in UAVs and Rover Domain. Paper accepted by IEEE-ICCA 2020 and finalist in Best paper award
2. Currently developing a autonomous methodology to generate an optimal path for multiple modular robots to lift an cargo.

### Teaching Assistant/ Research Assistant

January 2016 - December 2019

University of Nevada, Reno

Reno, NV

1. Worked on optimization of path-planning for agents in flocking environment. Developed a new reward structure and proved its efficiency in practical application such as hallway.
2. Assisted in scheduling, teaching, grading, conducting exams, and maintaining records of undergraduate students for Calculus-I Math-181, Introduction to System Control ME-410, and Intermediate Heat Transfer Lab ME-414L.
3. Working on research projects (optimization using NSGA-II, NSGA-III, Practical Swarm Optimization, and Model Prediction) in C++ and Python.
4. Worked on coordination between agents in an open environment for multi-agent system. Developed a new Difference Evaluation methodology for multi-agent system.

### Applications Engineer

May 2015 - December 2015

Indicate Technology

Santa Clara, CA

1. Developed and implemented programs ranging from simple inspection to logic-based graphical user interfaces for OGP machines.
2. Reported, explained and helped customers understand Geometric Dimensions and Tolerances from the measurements obtained.

### Solutions Engineer

October 2013 - March 2015

Synactive, Inc

Foster city, CA

1. Developed and implemented front end solutions using GuiXT Product Suites in functional areas of SAP for SD and MM modules.
2. Solely managed complete customer project lifecycle for multiple onsite and offsite product implementations.
3. Developed training materials and trained clients and fellow employees on Synactive products.

### Design Engineer Intern

May 2012 - August 2012

Kentex Manufacturing

Tyler, TX

1. Proposed an innovative solution to weld heavy pressure vessels for a client based on principles of contact mechanics using SolidWorks, and verified design reliability using Autodesk Algor.
2. Supported in-house staff during manufacturing by re-solving engineering issues during production.

### Teaching Assistant

January 2011 - May 2013

The University of Texas at Tyler

Tyler, TX

1. Taught and supervised experiments to undergraduates in the Material Science lab which include destructive and non-destructive tests on materials.

2. Taught and supervised projects to sophomores in Matlab, Mathematica.
3. Improvised experimental procedures for stress analysis using a GoPro camera. In addition, was responsible for the maintenance of lab equipment.

### Project Assistant

August 2011 - December 2013

The University of Texas at Tyler

Tyler, TX

1. Developed a three-dimensional model of life boat using Inventor for Verhoef company.
2. Performed Finite Element Analysis (FEA) on a three-dimensional model to identify stress concentration points of the life boat upon impact with water using Algor.

## EDUCATION

---

### Masters of Science in Mechanical Engineering

2011 - 2013

The University of Texas at Tyler, Tyler, United States

Thesis: Artificial Intelligent Metallurgical Grain Detection

Advisor: Dr. Sara McCaslin

### Bachelor of Technology in Mechanical Engineering

2006 - 2010

Jawaharlal Nehru Technological University, Hyderabad, India

## PUBLICATIONS

---

1. **Kesireddy**, McCaslin, Using Mathematica to Accurately Approximate the Percent Areas of Grains and Phases in Digital Metallographic Images, Computer Information System Science and Engineering Conference, 2012.
2. McCaslin, **Kesireddy**, Metallographic Image Processing Tools using Mathematica Manipulate, Computer Information System Science and Engineering Conference, 2012.
3. **Kesireddy**, McCaslin, Development of a Radial Basis Function Neural Network for Recognition of Common Phases Present in Carbon Steel Metallographs, Computer Information System Science and Engineering Conference, 2013.
4. McCaslin, M Young, **Kesireddy**, Using GoPro Camera in a Laboratory Setting, ASEE-GSW Conference, 2014.
5. S King, S Forer, **A Kesireddy**, L Yliniemi, Surrogate Difference Evaluation with Limited Peer to Peer Communication, International Conference on Autonomous Agents and MultiAgent Systems, 2018.
6. **A Kesireddy**, W Shan, H Xu, Global Path Planning in Multi-Agent Flocking: A Multi-Objective Optimization using NSGA-III, IEEE- Symposium Series on Computational Intelligence, 2019.
7. **A Kesireddy**, LRG Carrillo, New Method for Solving Multi-Objective Optimization using Decision Making, IEEE International Conference on Control & Automation 2020

## TECHNICAL SKILLS

---

<b>Tools</b>	SolidWorks, Algor, Auto Cad Inventor, Auto Cad Design, and ANSYS
<b>Software Programs</b>	C++, Python, R, HTML, CSS, Javascript, Matlab, Mathematica, ShareLatex, MySQL, PHP, ROS and Java
<b>Platforms</b>	Windows, Mac OS, and Linux.

## PERSONAL PROFILE

---

<b>Date of Birth</b>	08 August 1989
<b>Languages known</b>	English, Telugu and Hindi.

## DECLARATION

---

I hereby declare that above provided information is true to best of my knowledge belief.

Place : Corpus Christi, Texas

Date : 17 April, 2021

ADARSH KESIREDDY