# Samyak Jain

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Portfolio: https://u6734495-samyak.github.io/Samyak Jain Portfolio 2/

Github: https://github.com/u6734495-Samyak

#### **OBJECTIVE**

Computer Science has been exciting and allowed me to learn new things every day of my life. It is thrilling to gain insights and work on real-life projects for clients within a team environment. I am a keen enthusiast for Machine Learning and Data Analysis with great foundation skills in Math, Programming logic and cross-platform Coding. Passionate to learn and gain experience in the field of analytics to venture into the world of sports and use my skills and knowledge to one day become a Sports Analyst.

#### **EDUCATION**

# Australian National University, Bachelor of Advanced Computing (Hons)

Courses Completed: • Foundations of Computing • Data Wrangling • Data Mining • Information Theory • Strategic Thinking: Game theory • Intro to Machine Learning • Document Analysis • Advance Computing Research Methods • Software Design Methodologies • Intro To Data and Security • Advanced Computing Project • Neural Networks: Deep Learning • Statistical Machine Learning • Computer Vision

2016-2018

2018-2020

# International Centre for Applied Sciences – Manipal University, Bachelor of Science

# Research Thesis: Computational Alloy Design and Discovery (Magnesium)

Employed various machine learning models to build a predictive modeling approach to better inform industry experts about using Magnesium alloys with ideal mechanical properties to make lightweight vehicles. Main focus was to use machine learning to predict alloy compositions that could be useful for future metallic alloys.

#### **WORK EXPERIENCE**

#### Junior Analyst Intern, SMRTR - Dec 2020- Present

Liaising with various stakeholders internally and externally, handling large quantities of data from multiple sources, working on multiple tasks & projects simultaneously and dealing with any queries. Data mining, wrangling and intepreting quality of data in/out. Developing strategies to optimise the quality of statistical results. Maintaining databases. Solely Responsible for handling tableau architecture and providing insights through visualization.

#### App- Developer, Australian National University - July 2018-November 2018

Built a small and simple game called Frogger which is an adaptation of the PC version of the game. Team project and included heavy involvement in developing the User Interface and back end code.

o Vision based Sudoku Solver

Hough transform, Adaptive

thresholding, k-NN, Normalized

DLT, Constraint programming

o Face Recognition

o Image processing and classification

Yale-face training dataset, PCA, k-NN

Homography estimation and Image warping

Normalized DLT, 2D-Image

o 3D-2D Camera Calibration and vanishing

point detection

reprojection DLT, Hough transform

K-means Clustering for Color

K-means++ initialization, Silhouette plots for optimal K value

**Image Segmentation** 

#### **TECHNICAL SKILLS**

Proficient – Python, C++, OpenCV, Tableau, TensorFlow, SQL, Keras, PyTorch.
Familiar – HTML, CSS, PHP, Java, Data structures, Assembly level programming, Statistical Modelling.

## **SOFT SKILLS**

Communication skills – Interacting with people from various cultures.

Teamwork – Working cohesively in a team environment for the Frogger Game.

Independent Working skills – Ability to work with minimum supervision developed during my research thesis.

## **Research Papers at ANU:**

Network Reduction Technique For Classifying Faces Emotion.

**Transfer Learning (Neuron Distinctiveness)**