

Saksham Agrawal

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Profile

Experienced Finance Student with a demonstrated history of working in the investment management industry along with an experience in team management. Skilled in Data Analysis, Quantitative Analytics, Electronics, Machine Learning, and Trading. Strong research professional currently pursuing a **Bachelor's degree in Computer Science + M.Sc focused in Economics from Birla Institute of Technology and Science, Pilani.**

Professional Experience

Samhita Social Ventures

Development Intern

May 2019 – Jul 2019
Mumbai, India

Work was focused on **Business Development and acquiring clients.** Major aspect of the work included researching different Social Sectors along with the task of providing a "snapshot" report of all firms investing in the sector. Was able to complete a full analysis of Water Conservation sector including a 5 year timeline for the firm with product recommendations and strategies.

DRDO, INMAS Lab, Delhi

Project Lead

2018 – Aug 2019

Lead a project under DRDO, Delhi, to develop a reconnaissance system by using ROS and computer vision. Responsibilities included **team management, and maintaining the project timeline.** Main coding language for the software was Python. Phase 1 of the project was completed successfully.

Worldquant LLC.

Research Consultant

2018 – Oct 2019

Worked as a alpha researcher. Developed trading strategies for global markets and developed framework to backtest the same on time series data

Research

Volatility transmission between international markets: Analysis using MGARCH-BEKK model

2020

With increasing globalization, the links between markets have started to become stronger. As a result, markets now hold significant influence on other international markets. The study measures this effect by measuring the volatility transmitted from a market to another. The model used for analysis is the Multivariate GARCH model (BEKK(1,1))

First draft complete. Under review by a journal

Stock market volatility prediction using VAR-ML hybrid model

2020

The aim of this study is to study the next-day prediction accuracy of RNNs, when the input data is the market volatility, as compared to when VAR residual data is used additionally with market volatility.

First draft completed. Under review by a journal

Fixed Income Attribution: Analysis of fixed-income portfolios

2020

Increasing the explainability of fixed income portfolio returns using fixed income attribution. The study analyzes returns of three Indian fixed income portfolios to explain their returns and study changes over the first quarter of 2020

First draft completed. Under review by supervising professor

Community analysis of International stock markets

2020

Study focused on exploring community dynamics over the period of 2008-2020. The countries, whose stock markets are analyzed are, India, Japan, China, Singapore, Hong Kong, US & UK. Networks are significantly important for policy makers and investors too, since it enables an analysis of the group behavior of the markets, which is a major aim of the study

First draft completed. Under review by supervising professor

Recession Prediction using Markov Regime Switching Model

2019

The study tests the effectiveness of bond yields in predicting recessions in multiple countries, by using a modification of the Markov regime-switching model, which uses external regressors to calculate a time-varying transition probability developed by Andrew J. Filardo in 1998

First draft completed. Under review by supervising professor

Projects

Project PINAKA

2017 – Sep 2019

Research project inspired from ETH Zurich. The main aim was to automate flight systems to make high endurance flights using **Artificial Intelligence**. Project received significant funds in 2018-19 and was brought to prototype stage successfully. Major responsibility was **team management and securing funds**

Reconnaissance using Networked Robots

Oct 2018 – Aug 2019

The project was done in collaboration with DRDO with the main aim to develop a network of drones for border surveillance.

Awards

Boeing BUILD National Award

Aug 2019

Boeing India Pvt. Ltd.

Secured first place in Boeing BUILD for presenting Project PINAKA as a viable product/business model to a jury of Venture Capitalists, after clearing 5 stages of the competition from April to August 2019

Gave a 3 minute elevator pitch in the final round against 36 other teams at Boeing India Headquarters. The presentation included a complete research of the **target sector, competitors and a 5 year market plan** for the proposed product

CEERI National Innovation Award

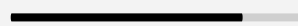
Jan 17, 2019

CSIR, CEERI Pilani

Received second position for giving a team presentation on "Project PINAKA" under the green technologies category. Jury composed of several distinguished scientists from CEERI Pilani.

Skills

Python



R



Java

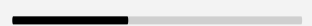


ROS

Robot Operating Software



LaTeX



MySQL



Interests

Artificial Intelligence

Worked on several open-source projects related to AI. Wish to pursue a career developing my skills in AI, specifically to develop an AI agent which has real life application.

Leadership/ Management

Wish to work in firms that give me a direct exposure to clients or let me handle teams. Have a strong sense of leadership having managed several technical teams, the past 3 years in college

Education

Birla Institute Of Technology and Science, Pilani

2017 – present

B.Tech Computer Science + M.Sc. Economics

Goa, India

CGPA: 7.5

IITians PACE

2015 – 2016

Class 12th Maharashtra Board: 87%

Mumbai, India

Atomic Energy Central School

2005 – 2014

Class 10th CBSE Board: 95%

Mumbai, India

Courses/ MOOCs

The Data Scientist's Toolbox

Oct 2018 – Dec 2018

Johns Hopkins University || Coursera

<https://www.coursera.org/account/accomplishments/certificate/JNDDRYTZD5UC>

Applied Plotting, Charting & Data Representation in Python

Aug 2018 – Oct 2018

University of Michigan || Coursera

<https://www.coursera.org/account/accomplishments/verify/F7LG78YCP8WG>

Machine Learning

Jun 2018 – Sep 2018

Stanford University || Coursera

<https://www.coursera.org/account/accomplishments/certificate/85LHHW7TAKYD>

Introduction to Data Science in Python

Jun 2018 – Jul 2018

University of Michigan || Coursera

<https://www.coursera.org/account/accomplishments/certificate/ZFDFK9DY9Y9X>