

KUMAR SHIVAM

Software Engineer
Research Data Platform
J.P. Morgan Chase & Co.

kumarshivam0512@gmail.com ✉
homepage 🏠
iamkumar0512 🌐 | kumarshivam0512 in
+91-8789735441 📞

EDUCATIONAL QUALIFICATIONS

Year	Degree	Institution(Board)	CGPA/%
July'17 – July'21	B.S., MTH	Indian Institute of Technology, Kanpur	8.9/10
2017	AISSCE – XII	Jawahar Vidya Mandir, Ranchi	94.0%
2015	CBSE – X	Jawahar Vidya Mandir, Ranchi	10.0/10.0

SCHOLASTIC ACHIEVEMENTS

- Got the opportunity for changing Major based on Academic Performance, 2018.
- Kishore Vaigyanik Protsahan Yojana(KVPY) Scholar, conducted by Indian Institute of Science (IISc), Bangalore. 2016
- Qualified in National Standard Examination in Physics (NSEP), conducted by Indian Association of Physics Teachers (IAPT). 2016-17
- Among the top 1% in National Standard Examination in Junior Science (NSEJS), conducted by Indian Association of Physics Teachers (IAPT), and qualified for Indian National Junior Science(INJSO). 2014-15
- Qualified National Talent Search Examination (NTSE), conducted by National Council of Educational Research and Training (NCERT).

WORK EXPERIENCE

JP Morgan Chase & Co.

August 2021 - Present

Research Data Platform Team

- Building a cloud platform to aggregate micro and macro economic indicators for all over the World.
- Building a cloud based RDS solution to DQ(Data Query) these indicators to feed to other data analyzing platforms.
- Building a platform(Macrosynergy quantamental computing system) that tracks macroeconomic trends across 40 countries, transforming macroeconomic data into tradable, investable strategies.

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WinVinaya Foundation

Indian Sign Language Converter

June 2020-July 2020

- Got Pre-Placement Offer at JP Morgan Chase.
- Built a full stack android application that converts ISL gestures to text and vice versa.
- Trained a Recursive Neural Net model to recognize hand gestures using google's Mediapipe library as encoder.
- Used NLP to extract root words to ease the transition from english to ISL grammar.
- Used S3 Bucket and EC2 instance of AWS to host back-end.

Nanyang Technological University, Singapore

Low-Complexity Automatic License Plate Detection June 2019-July 2019

- Reduced the Complexity of Automatic License Plate Recognition(ALPR) system for identification of vehicles violating traffic rules using Image processing techniques.
- Applied character segmentation based on horizontal projection of grey-scale images.
- Signature based character recognition based on recognizing the vertical and horizontal edges detection.
- Retrained the classifier(Squeeze-Net) and pruning for different camera angles.

RELEVANT COURSES

Financial Economics	Modern Cryptography	Data Structures and Algorithms	Group Theory
Probability & Statistics	Linear Algebra	Partial and Ordinary Differential Equations	Logic and Set Theory
Topics in Topology	Multiple-variable Calculus	Quantum Physics	

PROJECTS

Cryptographic Ciphers

Jan 2020- May 2020

IIT Kanpur

Github Repository

- Broke DES(Data Encryption Standard) Cipher and AES(Advanced Encryption Standard) Cipher using Known Plaintext Attack.
- Broke RSA Cipher using lattice theory and Copperfield's Algorithm upto exponent 5.
- Broke Substitution and Sub+Permutation Cipher using Frequency Analysis.
- Broke Vigenère Cipher.

Microsoft India

Microsoft Academic Accelerator

October 2018

- Built a full stack web application that predict the percent chance of thunder storm at particular location on the basis of few meteorological data.

MISCELLANEOUS

- Achieved 1st Position in Cluster-2 Basketball U-19 tournament organized by CBSE and recognized by Ministry of Youth Affairs And Sports, Govt.Of India. [2013-2014, 2015-2016]
- Participated in Basketball Nationals U-19 tournament organized by CBSE and recognized by Ministry of Youth Affairs And Sports, Govt.Of India. [2013-2014]

POSITIONS OF RESPONSIBILITY

- **Mentor, Association for Computational Activities, IIT Kanpur 2020 :**
Responsible for mentoring a group of students through projects.
- **Manager, Finance, Antaragni 2019 :**
Responsible for the expenditure management regarding the festival and also organising the vendors across the city for the festival.

SKILLS

Programming: C, C++, Java and Python.

Machine Learning: NLP(Natural Language Processing), RNN(Recursive Neural Net), CNN(Convolutional Neural Net), Regression.

Cloud: EC2, Flask, PHP, API.

Web Development: HTML, CSS, JavaScript, Bootstrap.

Database: MySQL

Utilities: Linux shell utilities, Git and Vim, OpenCV, L^AT_EX.