



KARAN BANIA

CS UNDERGRAD @ BITS

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Education

B.Tech. Computer Science, Minor in Data Science

2021 - Present

BITS Goa, K.K. Birla Goa Campus

Grade - 9.35/10.0, Batch Rank - 16/792, Department Rank - 13/262

Awarded merit scholarships for being in top the 3% every semester up-till now.

Research Experience

Generalist Medical AI for Grounded Radiology Reports

August '23 - Present

@ APPCAIR Lab (BITS Goa), Macquarie University (Australia)

Computer Vision project focused on summarising and/or generating X-ray radiology reports.

Supervisors - A. Srinivasan, T. Verlekar, S.Liu

Internships & Summer Schools

IIIT-H's 7th Summer School on AI with focus on CV

July '23 - August'23

A summer school with strong focus on CV and 3D vision organized and supervised by leading professors in the field in India

Neuromatch Summer School (NMA) - Deep Learning Track

July '23 - August'23

A summer school which starts of with ML basics and covers a comprehensive syllabus on current innovations in the field + a mentor guided project.

Intern at StoryQube (VoiceQube)

June '23 - August'23

Working on an AI research project that involves developing solutions for Effective Stock trading.

Coursework

On Campus

Logic in Computer Science (**A***), Quantum Information and Computing (**A***), Data Structures and Algorithms(**A**), Differential Equations (**A**), Object Oriented Programming (**A-**), Discrete Structures for Computer Science (**A-**), Computer Programming (**A-**), Linear Algebra and Complex Analysis (**A-**), Probability and Statistics (**A-**), Database Management (**A-**) (**A*** - Batch Topper, **A** - 10, **A-** - 9)

Online

Deep Learning Specialisation, Machine Learning Specialisation

cs231n, Stanford Computer Vision (**Done**); cs229, Stanford Machine Learning (**Done**); cs224w, Stanford ML with Graphs (**Done**, Graduate level course), cs229m, Stanford Statistical Learning Theory (**Ongoing**)

Projects

SAIDL Summer Induction Assignment 2023

[Code](#)

I have solved the complete assignment (+ documented it) involving Core ML, Computer Vision and RL tasks. All of the tasks required sufficiently strong knowledge of underlying ML/DL principles.

Clubs and Committees

SAiDL (Society of AI and DL), BITS Goa | Member

July '23 - Present

We arrange talks, carry out courses, develop libraries and try to promote a sense of AI, DL and ML in the college. (Very competitive induction, ~5 people get inducted from a batch)

Project Kratos, BITS Goa | Member of the Autonomous Subsystem

July '23 - Present

We try to build a fully functional and autonomous Mars Rover using Computer Vision and Deep Learning Techniques; we also implement path planning algorithms.

Teaching

Teaching Assistant, CS F214 - Logic in Computer Science

August '23 - Present

Involved in making assignments and quizzes, with prof. Baskar.

Libraries Numpy, SciKitlearn, Pandas, Matplotlib, PIL, OpenCV, torch-sparse

Tools and Languages Git, Anaconda, C++ , Java (Comfortable), Python (Proficient)

Frameworks Pytorch, PyG (Pytorch Geometric)

Soft Skills Hard-working, Creative Writing, Canva (designed merch for the CSIS dept.)

Extra-curricular

Sports : Table Tennis

Member of Institute Team, BITS Goa

August '22 - Present

Awards

All India Air Force Schools Athletics and Sports Championship

- 2019 @ Chandigarh - Gold Medalist
 - 2018 @ Bangalore - Bronze Medalist
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Relevant Exam Scores

GRE - 323/340 (Quant - 168/170, Verbal - 155/170, AWA - 4.5/6.0)

August'23