

UJJWAL RANJAN | 17MA20043

MATHEMATICS & COMPUTING (M.Sc. 5Y)



EDUCATION			
Year	Degree/Exam	Institute	CGPA/Marks
2022	M.SC(5YR)	IIT Kharagpur	7.95 / 10
2016	All India Senior School Certificate Examination	Resonance International School	88.4%
2014	All India Senior School Certificate Examination	Resonance International School	10 / 10

COURSEWORK INFORMATION

Programming and data structure, Design and analysis of algorithm, Object oriented programming, Machine learning foundation and application, Neural networks and deep learning, Improving deep neural networks: hyperparameter tuning, regularization and optimization, Structuring machine learning projects.

SKILLS AND EXPERTISE

Programming Languages-

Expert: C, C++ Familiar: html, css, javascript, python

Libraries-panda, numpy, scikit-learn, matplotlib, opencv

COMPETITION/CONFERENCE

Google Code Jam|2020

•Qualified for Round 1 and secured a rank of 2563 in round 1A of Google Code Jam, 2020 out of more than 32000 participants.

Competitive Programming

•A peak rating of 1643 on Codeforces (@ujj wal).

AWARDS AND ACHIEVEMENTS

- Secured All India Rank 1305 in Joint Entrance Examination Advance 2017 among 200000+ students.
- Secured All India Rank 125 during 2016, in National Level Science Talent search Examination (N.S.T.S.E.) conducted by the Unified Council.
- •Secured All India Rank 1 in mathematics and overall All India Rank 1180 during 2014 in National Level Science Talent search Examination (N.S.T.S.E.) conducted by the Unified Council.
- Recipient of Innovation of Science Pursuit for Inspire Research (INSPIRE) Scholarship.
- Secured International Rank 195 and 2012 in International mathematics olympiad and International Rank 122 and 537 in national science olympiad conducted by Science Olympiad Foundation in year-2013,2014.

PROJECTS

VIS-GRAPH

- Developed a desktop application graph editor, tool to draw and analyse graphs.
- •Prominent graph algorithm integrated like shortest path problem, graph planarity check, maximum matching, minimum vertex cover, maximum independent sets.
- •Implemented addition, deletion, colouring and moving of Vertices and Edges, opening and saving the graph
- Documentation done using prominent UML diagrams

Technology used-python(backend),pyqt5(frontend),staruml

INVENTORY

- •Was solely responsible for building a Deep Neural Networks model(from scratch) to create inventory management system giving over 88% accuracy.
- •Used the last 3 years of sales data for a restaurant as training data, so as to identify the sales pattern of each season.
- •Implemented dropout normalisation to reduce overfitting, Adam optimization algorithms for parameter update.

Technology used-Python,pandas,Numpy

Web-app

- Developed blog writer using django framework(backend), HTML, CSS, Javascript(frontend)
- Cloned various websites like netflix ,apple using HTML,CSS,Javascript

EXTRA CURRICULAR ACTIVITIES

- •Member of the organizing team of KHOJ- AZAD Hall's treasure hunt competition for freshers.
- Participated in Disaster management Training Program and Cleanliness Drive Organised by NSO Health and Fitness, IIT Kharagpur.
- Was ranked 2nd in Inter Hall Case Study IIT Kharagpur during 2019.
- Contributed in winning Sports General Championship 2017-18 for Azad hall, by participating in Chess.