Maitreyee Sar (she/her)
Bachelor of Technology (BTech), Computer Science and Engineering (3rd year/5th Semester)
Kalinga Institute of Industrial Technology (KIIT)
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ACADEMIC DETAILS

Examination	Institute	Year	CPI/%
Bachelor of Technology	*Computer Science and Engineering* School of Computer Engineering KIIT, Bhubaneswar	2022 - Present	9.76 SGPAs: 9.76,9.81, 9.79, 9.65
Higher Secondary (AISSCE)(PCM)	Hem Sheela Model School, Durgapur	2022	93.8%
Secondary (ICSE)	Carmel Convent High School, Durgapur	2020	96.4%

FIELDS OF INTEREST

- Data science and machine learning
- Database management
- Computational geometry
- Computer vision and computer graphics
- Computer architecture
- Probability, linear algebra, discrete structures

PROJECTS / INTERNSHIPS

- **Geometric analysis of Mandala in the context of computational art** | *Python*
  (Guide: Prof. Partha Bhowmick, Department of Computer Science and Engineering, Indian Institute of Technology Kharagpur , May - July 2024)

  - Mandalas, known for their geometric precision and symmetry, significantly impact the human psyche. Analyzing mandala structures reveals crucial insights that aid in the correction of handcrafted mandalas and fostering error-free representations for accurate scientific interpretation and broader applications. .
  - Developed a thorough understanding of image processing using OpenCV, from binarization to connected component analysis. Used geometric approaches to find characteristics of various mandalas
  - Gained a first-hand view of the behind-the-scenes process of writing a conference paper. Manuscript submitted to the 27th International Conference on Pattern Recognition (ICPR), 2024 (Accepted)

- **Keyword based Document Indexing and Retrieval System** | *Python, SQL*
  (Guide: Prof. Arobinda Gupta, Department of Computer Science and Engineering, Indian Institute of Technology Kharagpur , Jun - Aug 2023)

  - The program creates an index of frequently searched words from a set of text files using MySQL. When a user searches for a keyword, the index provides a list of files containing the word and its frequency. If the word is not in the index, the program scans the files, updates the index, and uses it for future searches, avoiding repeated file scans. .
  - Gained an idea of the process behind development of an application. I learned various models for addressing optimization challenges and selecting the right one based on user requirements. This project also provided practical knowledge of implementing indexing mechanisms and understanding the performance differences between approaches.

- **Student Database Management System** | *Python, MySQL*
  April 2022

- **Linear search analysis using scatter plot** | *Python*
  (Guide: Prof. Sajal Mukhopadhyay, Department of Computer Science and Engineering, National Institute of Technology Durgapur , Oct - Nov 2020)

PUBLICATIONS

- **Peel and Pool: The Path to Mandala Perfection**. Tusita Sarkar, Maitreyee Sar, Partha Bhowmick. *International Conference on Pattern Recognition (ICPR) 2024* (Accepted)

TECHNICAL SKILLS

- Python (Matplotlib, Numpy, OpenCV, Scikit Learn)
- Java
- C
- SQL

RELEVANT COURSES

Grades of completed courses indicated in brackets, out of 10

- Algorithms
- Computer Networks
- Software Engineering
- High Performance Computing
- Data Mining and Warehousing
- Object Oriented Programming (Grade: 10)
- Database Management Systems (Grade: 10)
- Operating Systems (Grade: 9)
- Computer Organization and Architecture (Grade: 9)
- Discrete Structures (Grade: 10)
- Data Structures (Grade: 10)
- Automata Theory (Grade: 10)
- Probability and Statistics (Grade: 10)
- Differential Calculus and Linear Algebra (Grade: 10)

ACADEMIC ACHIEVEMENTS

- Ranked **9 out of 4316** students across KIIT CSE 2022-Admitted batch at the end of the third semester
- Qualified West Bengal Joint Entrance Examination (WBJEE), 2022 and BITS Admission Test (BITSAT), 2022
- Secured **second** rank in Barddhaman district in national level examination of Vidyarthi Vigyan Manthan (VVM) in association with Vigyan Prasar, Department of Science and Technology (DST), Govt. of India and National Council of Educational Research and Training (NCERT), Ministry of Education, Govt. of India), 2020-21
- Secured **third** rank with scholarship and zonal bronze medal in the Eastern Zone in National Cyber Olympiad (NCO) conducted by SOF in collaboration with TCS-iON (Percentile score - 99.46, City rank - 1, Zonal rank - 3, International rank - 29), 2018-19

CO-CURRICULAR ACHIEVEMENTS

- Student Member of Institute of Electrical and Electronics Engineers (IEEE)
- Member of the AI, ML and Research team at Kodessa – KIIT Women-in-Technology Society
- Member of the English editors' team and Inkspire (management team of the official Wordsmith blog on WordPress, including content planning, task distribution, and publishing) at Wordsmith – KIIT Literary Society
- Dramatics Minister for the 2020 batch of Carmel Convent High School, Durgapur, WB, India (leadership role, student in-charge of conducting all major school events, anchoring and scriptwriting)
- Crowned 'Carmel Queen' (Runner up, batch of 2020), Carmel Convent High School, Durgapur, India
- Sangeet Visharad diploma (Five years; First division with Distinction) in Indian classical music (vocal), 2022; Pracheen Kala Kendra, Chandigarh
- Ankan Bivakar diploma (Five years; First division with Distinction) in painting, 2019, Bangiya Sangeet Parishad (affiliated to Rabindra Bharati University, Kolkata)
- Achieved Excellence in co-curricular segment (Creative Writing) as part of TIMES Futureshine from TIMES of INDIA group, 2019
- First prize in Essay Competition organised by Syndicate Bank, Durgapur, for Vigilance Awareness Week, 2019
- Member of the Spread Peace, Improve and Conserve Environment (SPICE) club, 2015-20, Carmel Convent High School, Durgapur, WB, India

REFERENCES

- **Arobinda Gupta** Professor, Department of Computer Science and Engineering, Indian Institute of Technology Kharagpur, Kharagpur 721302, India
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- **Partha Bhowmick** Professor, Department of Computer Science and Engineering, Indian Institute of Technology Kharagpur, Kharagpur 721302, India
  Email: pbcse [AT] cse.iitkgp.ac.in

- **Vishal Meena** Assistant Professor, Kalinga Institute of Industrial Technology, Bhubaneswar, India
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Maitreyee Sar
6th October, 2024
Bhubaneswar, India