KRISTOPHER PAUL

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WORK EXPERIENCE

BRAIN Consultant | July 2023 - Oct 2023
WorldQuant | *Remote*

- Created novel alpha strategies that involve the formulation of mathematical expressions, code and hyperparameters to predict future movement of financial instruments.

Undergraduate Researcher (Theoretical Machine Learning) | Jan 2023 - May 2023
Project Advisor: Prof. Anirban Dasgupta, IIT Gandhinagar | *Gujarat*

- Developed a Coreset based approach to approximate Neural Tangent Kernels and in effect created a method which relied on Supersampling using Kernel Herding to approximate Neural Networks (Report).

Machine Learning Intern (NLP Research) | Jun 2022 - Oct 2022
Elucidata | *Remote*

- Co-authored a research paper at the age of 18 on Multi-Task Learning for Biomedical NER, which has been published. It was part of a team-wide effort to decrease the latency of transformer NER models; in effect, a 20x speedup was achieved (Paper).

PUBLICATIONS & PRESENTATIONS

Reducing Inference Time of Biomedical NER Tasks using Multi-Task Learning | Dec 2022
Proceedings of the 19th International Conference on Natural Language Processing (ICON) | *Publication*

Nearest Neighbour Document Image Transformer (kNN-DiT) | Dec 2022
Datathon@IndoML 2022 | *Presentation*

EDUCATION

B.Tech in Computer Science and Engineering, IIT Gandhinagar · CPI: 9.02/10 | Expected 2026

Relevant Coursework

- **ES661** Probabilistic Machine Learning, **CS691** Understanding LLMs, **CS328** Introduction to Data Science
- **ES242** Data Structures & Algorithms I, **ES301** Data Structures & Algorithms II, **CS614** Advanced Algorithms
- **ES214** Discrete Maths, **MA205** Multivariable Calculus, **MA104** Ordinary Diff. Eqns, **MA103** Linear Algebra

AWARDS

ACM ICPC Regionalist | April 2023, Dec 2023
Qualified for ICPC Regionals in my first and second year beating all other teams from IIT Gandhinagar. Attained a rank in the top 40 out of 2350 teams, competing against students from various colleges across the country.

Codechef Snackdown Finalist | Feb 2019
Selected in the top 40 teams internationally from around 28000 teams of various age groups for the final round of Codechef Snackdown (competitive programming competition). It was based on Algorithms and Data Structures.

IOITC Finalist | May 2018, 2019, 2020, 2021
Selected for IOITC (International Olympiad in Informatics Training Camp), a competitive programming camp, with 30-40 other students in India consecutively for four years. Was the youngest to qualify for the camp in 8th grade.

SKILLS

Competitive Programming	Codechef Max. **2241** (**6★**), Codeforces Max. **1937** (**Candidate Master**)
Packages & Frameworks	Scikit-Learn, Tensorflow, Keras, PyTorch, Pandas, NumPy, Matplotlib, Selenium
Prog. Languages	Python, R, C++, C, Java
DBs, Tools & Technologies	MySQL, MongoDB, PostgreSQL, Git, Django, Flask

Quantitative Analysis | Machine Learning | NLP | Deep Learning | Algorithms | Data Structures | Web Scraping | Data Visualization | Predictive Analysis | Statistical Modelling | Data Mining | Clustering & Classification