Hetvi Jethwani

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ACADEMIC DETAILS

Indian Institute of Technology, Delhi	**GPA: 9.43/10.00**
Bachelors of Technology in Mathematics and Computing	*July 2018 - May 2022*
Class 12 (AISSCE)	**94.6%**

SCHOLASTIC ACHIEVEMENTS

- **ACM-W Scholar**: Only undergraduate to be awarded the scholarship to attend GECCO 2021 — 2021-22
- **School for Poetic Computation**: Attended the augmented reality summer program on a scholarship — 2021-22
- **Department Rank**: Ranked 4 out of a batch of 44 — 2020-21
- **Top 7% of students, IIT Delhi**: in Semester 1, ranked by GPA, amongst 900+ batchmates — 2018-19
- **JEE Advanced**: Secured the 99.6th percentile, i.e. rank 645 out of 160,000+ applicants — 2017-18
- **KVPY**: Awarded the KVPY-SX Fellowship; secured a rank of 384 amongst 50,000+ applicants — 2017-18
- **National Standard Examinations in Physics & Astronomy**: Achieved a rank in the national 1% — 2017-18

PROJECTS

- **Examining the role of priors in the evolvability of boolean functions**: Prof. Sumeet Agarwal, IIT Delhi *Python*
  - Modelling evolution formally by exploring existing theoretical frameworks, and experiments via simulation
  - Establishing equivalence between frameworks based on genetic algorithms, learning theory, & algorithmic information theory by studying the role that different kinds of inductive bias over the mutation space play
    Poster "Examining Forms of Inductive Bias Towards 'Simplicity' in Genetic Algorithms to Enhance Evolvability of Boolean Functions" accepted at GECCO 2021, sponspred by ACM; Awarded the ACM-W scholarship for the same
- **Summarizing hierarchical, multidimensional data**: Prof. Laks Lakshmanan, UBC Vancouver *Java*
  - Constructing and implementing a tractable algorithm to summarize predictive outputs from ML Models over multidimensional data and hence find patterns in the constituent hierarchies
    Working as a MITACS Globalink research intern
- **Learning the action space to assist neural architecture search**: Prof. Simon S. Du, Uni. of Washington
  - Analysing methods which use latent actions to bias the search procedure towards better architectures
  - Currently proving complexity lower bounds for optimization of discrete, approximately-convex functions
- **Optimized 3D printed splints for wrist theraputics in space**: Baylor College of Medicine, Oxford *MATLAB*
  - Created several fitness metrics to quantify splint-fit measure and used ANOVA to determine significance
  - Developed a User Interface to enable fitness and FEA analysis with ease by medical staff
- **Synopsis generation using reinforcement learning**: Prof. Niladri Chatterjee, IIT Delhi *Python*
  - Implemented a framework for abstractive, multi-document text summarization of technical reports
    Selected for IITD IRD's Discover & Learn 1-2-3-4 and awarded a grant from Nokia

RELEVANT COURSEWORK

- Linear Algebra and its Applications, Discrete Mathematical Structures, Data Structures and Algorithms, Calculus, Probability and Stochastic Processes, Real Analysis, Differential Equations, Machine Intelligence and Learning, Algebra, Algorithm Design & Analysis, Optimization, Statistical Methods, Data Mining, Functional Analysis, Theory of Computation*, Coding Theory*

TECHNICAL SKILLS

- **Programming Languages**: Python, MATLAB, Java, C++, PHP, TeX, C
- **Other software**: Autodesk Inventor, Krita, SparkAR, Processing
- **Py Libraries:** TensorFlow, PyTorch, Keras, Scikit-Learn, Numpy, Pandas, Jupyter, OpenCV, PIL, PyQuil, PyBDM

VOLUNTEERING EXPERIENCE

- **Girls Who Code:** club facilitator - teaching girls from underprivileged environments aged 11-13 how to code
- **Indradhanu:** Organized various events like IITD's first Pride Week, *Spread the love,*- a community art event, etc.

EXTRA-CURRICULAR ACTIVITIES

- **Grader, Forum Moderator, and Teaching Assistant** at **Art of Problem Solving** (@cosmicbhejafry)
- **Literature and art enthusiast:** co-founder of an art newsletter, loves zine making.
- *My poetry has been accepted in small publications like Mellom Press, and even the 1st NeurIPS Resistance AI Workshop!*
- **Quizzing:** enthusiastic quizzer and quizmaster; most recently made an inclusivity quiz for COVID relief

* indicates currently enrolled for