Divyanshu Srivastava

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Work Experience

TATA Research Development and Design Centre (Pune, Maharashtra)
ROLE: Researcher – Life Sciences Group
September 2018 – Till Date

Education

Indraprastha Institute of Information Technology, Delhi — CGPA: 9.26
M. Tech (Computational Biology)
2016 – 2018

Cluster Innovation Center, University of Delhi — Percentage: 83.61
B. Tech (IT and Mathematical Innovations) Specialization – Electronics and Robotics
2012 - 2016

Lucknow Public School, Lucknow (Uttar Pradesh) — Percentage: 88.8
CBSE – AISSCE (Class XII)
2011

Lucknow Public School, Lucknow (Uttar Pradesh) — Percentage: 91.83
CBSE – AISSE (Class X)
2009

Skills

Expertise Area	Computational Biology, Statistics, Machine Learning, Biological Natural Language Processing, Network Science
Programming Languages	Python, MATLAB, R, UNIX Shell Scripting, C, C++, JAVA
Tools and Technologies	CUDA C, Arduino
Technical Electives	GPU Computing, Statistical Computation, Probabilistic Graphical Models, Genetics, Stochastic Simulations in Systems Biology and Biophysics, Logic Systems.

Internship

Defense Terrain Research Laboratory - DRDO (Research) (Jun, 15 –Nov, 15)
Guide: Dr. A. K. Sinha Team Size: 5
Designing and Simulating cognitive models for deceptive military scenarios.

Birla Institute of Technology - NOIDA (Research) (Apr. 15 – Jul. 15)
Guide: Dr. Smitha Jha
An ant colony algorithm for scheduling applications to Grid Heterogeneous systems with its implementation on MATLAB.

PHD Chamber of Commerce (Industrial) (May, 14 –July, 14)
Guide: Dr. B. Biswal Team Size: 3
Under E-Business Circuit, improved IT infrastructure of MSMEs by designing specific software. Specifically developed a Packaging Module and a Pressure Calculator for AMD Industries, Ghaziabad (U.P.).

Academic Projects

M. Tech Thesis (June, 17 – July, 18)
Guide: Dr. Vibhor Kumar
Graph Signal Processing based analysis of biological networks.

GPU Based Fast Single Cell Search Engine Using Locality Sensitive Hashing. (Mar, 17 – July, 17)
Team Size: 2
Guide: Dr. Debarka Sengupta, Dr. Vibhor Kumar, Dr. Ojaswa Sharma
We implemented a parallel version of Locality Sensitive Hashing based approximate search on gene expressions of 50,000 cells.

Deriving Causal Protein-Signaling Network Using Single Cell Protein level data. (Mar, 17 – May, 17)
Team Size: 2
Guide: Dr. Chetan Arora
We used Information theoretic model selection methods to find causality among 11 proteins and lipids based on flow cytometry data of single cells.

Web based Clinic Management System (Mar, 16 – May,16)
Guide: Dr. Pankaj Tyagi
Developed a Web based Clinic Management System for Doctors using PHP-LARAVEL framework.

DU Innovation Project – CIC202 (Dec, 13 – Feb, 15)
Guide: Dr. Pankaj Tyagi Team Size: 10
Designing innovative working models and IT based modules to explain concepts of physics and mathematics. Particularly worked on "The Magnet Gun", "Inclinometer", "Magic Square Application" and "Understanding Gears in a clock".

Machine Learning Model to predict chances of survival on Titanic (Feb, 15 – Mar, 15)
Guide: Mr. Abhijeet Parmar
Logistic Regression (Supervised Learning) based predictive model was learned to quantify one's chance of survival on the Titanic.

Android Controlled Robot (Nov, 14 – Dec,14)
Guide: Mr. Abhijeet Parmar
Arduino Controlled Wheeled Robot controlled from an Android device's accelerometer data

transmitted over Bluetooth.

Publications

- **Divyanshu Srivastava, Arvind Iyer, Vibhor Kumar, Debarka Sengupta;** CellAtlasSearch: a scalable search engine for single cells, ***Nucleic Acids Research***, Volume 46, Issue W1, 2 July **2018**, Pages W141–W147, https://doi.org/10.1093/nar/gky421.
- **Divyanshu Srivastava**, Krishanu Das Baksi, Kuntal K. Bhusan, Sharmila Mande; 'EviMass': A literature evidence based miner for human microbial associations, ***Frontiers in Genetics,*** **August 2019,** doi: https://doi.org/10.339/fgen8e.2019.00849
- Sunil Nagpal, **Divyanshu Srivastava**, Sharmila S. Mande. "What if we perceive SARS-CoV-2 genomes as documents? Topic modelling using Latent Dirichlet Allocation to identify mutation signatures and classify SARS-CoV-2 genomes." ***bioRxiv*** (2020). doi: https://doi.org/10.1101/2020.08.20.258772
- **Divyanshu Srivastava**, Vibhor Kumar. *Graph signal processing based analysis of biological networks*. Diss. IIIT-D, 2018. URL: https://repository.iiitd.edu.in/xmlui/handle/123456789/649

Positions of Responsibility

- Teaching Assistant – IIITD (Aug, 16 – May, 18)
- Purchase manager – AUTONOMI (Robotics Society - CIC) (Sep, 14 – Aug, 15)
- Sports Captain of the school - LPS (Apr, 09 – Mar, 10)

Awards, Achievements and Accolades

- IELTS 2019 – **8.5** (Reading – 8.5, Speaking – 8, Writing - 8, Listening – 8.5)
- GATE – Computer Science 2016 All India Rank 3073 with a Gate Score of **532.**
- Awarded First Prize - "**Best in Robo**" in Innovation Fair organized during Innovation Festival, 2015 held at National Science Centre, New Delhi for Android Controlled Robot.

Interests and Hobbies

- Electronics and Machines
- Sports

Personal Information

- Nationality Indian
- Gender Male
- Date of Birth January 28, 1993
- Languages Known English, Hindi

References

1. Dr. Debarka Sengupta
   Assistant Professor, IIIT-Delhi. Email: debarka@iiitd.ac.in
2. Dr. Vibhor Kumar
   Assistant Professor, IIIT-Delhi. Email: vibhor@iiitd.ac.in

Declaration: The above information is correct to the best of my knowledge.
Divyanshu Srivastava
Date: August 31, 2020