Srishti Majumdar

srishtimajumdar@gmail.com • srishti-majumdar • srishti96

Education

University of California, Los Angeles (UCLA) **GPA: 3.89/4.00**
Master of Science Computer Science *Graduated: Mar 2020*
Relevant Courses: Machine Learning in Bioinformatics, Computational Methods in Genomics, Probabilistic Programming and Relation Learning, Large Scale Data Mining, Neural Network and Deep Learning

Manipal Institute of Technology (MIT Manipal) **GPA: 9.30/10.00**
B.Tech. Computer and Communication Engineering, Minor: Soft Computing *Graduated: Jul 2018*
Relevant Courses: Data Structures, Fundamentals of Algorithm Analysis and Design, Artificial Intelligence, Neural Networks and Fuzzy Logic, Data Mining and Predictive Analysis, Optimization Techniques, Web Intelligence

Awards and Honors

- IIE's WeTech Juniper Networks Scholarship and Internship, 2018 - $5000 and 6-month paid internship at Juniper Networks, India
- Gold Medal for Rank #1, B.Tech. Computer & Communication Engineering, 2018

Research and Projects

Paper Classification in a Directed Citation Network **Jan 2020 - Mar 2020**
Course: Probabilistic Graphical Models for Structured Data *UCLA*

- Developed Graphical Markov Neural Network and Conditional Random Field models for probabilistic classification of papers in the CORA dataset.
- Achieved an accuracy of 89% comparable to the best models for the task on the CORA Dataset online.

Trends in Acute Kidney Injury (AKI) **Jan 2019 - Oct 2019**
Graduate Research, Advisor: Sriram Sankararaman *UCLA*

- Identified trends in patients suffering from AKI by visualising and analysing temporal data containing laboratory results of patients over multiple visits.
- Predicted AKI stages from laboratory results with an average Precision-Recall of 80%.
- Built a data pipeline to train and evaluate non-linear models to classify and group patients. This pipeline was used to standardize the evaluation practices across the research lab.

Academic Citation Recommendation **Jul 2019 - Sep 2019**
Graduate Research, Advisor: Miodrag Potkonjak *UCLA*

- Used the AMiner ACM and DBLP datasets to conduct citation and co-author network analysis. Compared graph-based analysis to other commonly used algorithms to decide factors for combining models and improving existing ranking for recommendations.
- Developed the graph-based component of a hybrid citation recommendation system.

DREAM7: NCI-DREAM, Drug Sensitivity and Drug Synergy Challenges **Feb 2019 - Mar 2019**
Course: Computational Methods in Genomics *UCLA*

- Achieved rank 3 overall and scored similar (± 0.002) to the rank 1 algorithm in Non-linear Regression category.
- Built a non-linear ensemble regression model, random forests, to rank the sensitivity of 18 breast cancer cell lines to 31 compounds given the genomics characterisations of cell lines. Final rankings for ranking drugs was based on combining scores obtained by training individual genomics datasets.

Twitter Application Data Analysis **Jan 2019 - Feb 2019**
Course: Large Scale Data Mining *UCLA*

- Evaluated linear and non-linear models to predict future tweet activity for 5 hashtags given current and previous activity using the mean squared error (MSE) metric.

Sentimental and Predictive Analysis of Depression **Mar 2017 - Apr 2017**
Course: Data Mining and Predictive Analysis Lab *MIT, Manipal*

- Implemented, compared and evaluated models to conduct sentimental analysis over data to identify varying degrees of positive and negative sentiments.
- Achieved an accuracy of 86% identifying depression-indicative posts and messages.

Select Industry Experience

Amazon, Software Development Engineer **Apr 2020 - Present**
Pricing and Efficiency Organization: Java, Ruby, Python *Seattle, USA*

- Working on automating procedures for the AWS pricing service which reduces manual effort by 75% for every new feature deployed.
- Improved testing and deployment cycle in the pre-production stages by identifying and resolving pain points.

Juniper Networks, Software Developer Intern **Jan 2018 - Jun 2018**
Automated Customer Troubleshooting: Python, NLTK, Scikt-Learn, NumPy, Matplotlib *Bangalore, India*

- Used an NLP based pipeline to create features from 2200 user complaint reports related to 4 network devices.
- Built a classification model to identify network device issues with 92% accuracy.
- Reduced manual intervention and turnaround time from around 3 months to within a week.

Bharti Airtel, Software Developer Intern **Jun 2017 - Jul 2017**
Automated Customer Management: Java, Python, NLTK, Scikit-Learn, IBM Watson Tone Analyser *Gurgaon, India*

- Developed an ensemble model to respond to customer queries and reduce query resolution time by over 80%.
- Achieved an accuracy of 95% in expected responses using a supervised learning model for stored queries and an accuracy of 83% in expected responses using an unsupervised learning model for unsaved queries.

Teaching

University of California, Los Angeles

- CS M152A Digital Design Lab (Fall 2019, Winter 2020): Designed and conducted bi-weekly lab sessions for 60 students for the implementation of combinational and sequential circuits on Field Programmable Gate Arrays.
- CS 131 Programming Languages (Fall 2018, Spring 2019): Taught concepts in programming languages and language paradigms.
- CS M51A Logic Design of Digital Systems(Winter 2019): Designed sessions and led discussions for combinational and sequential approaches to designing digital systems.

Conference Presentations

Computational Genomics Summer Institute, UCLA **2019**

- Presented AKI research and 'DREAM7 - NCI-DREAM, Drug Sensitivity and Drug Synergy Challenges' project.

International Conference on Computational Methods in Engineering and Health Sciences, Japan **2016**

- Presented *'Survey Paper on Pattern Recognition Techniques and Applications'* at Kyushu Institute of Technology.

Publications

- Submitted for Review: Soham Sinha and **Srishti Majumdar**, *Implementing EHR in India: Learning from Global Best Practices*
- Shouvik K. Majumdar, Angana P. Sarma, **Srishti Majumdar**, *E-commerce and Digital Connectivity: Unleashing the Potential for Greater India–ASEAN Integration*, Journal of Asian Economic Integration, 2(1), 62–81, Apr 2020
- Dr. Arpita Mukherjee, Soham Sinha, **Srishti Majumdar**, *India as a Health-tech Hub: Opportunities and Constraints*, Trade Promotion Council of India Blog, Nov 2019
- Contributor: *Making India a Health-Tech Hub: Vision Plan 2019 - 2024*, Asia Health, Confederation of Indian Industry, Oct 2019

Skills

- **Programming:** Python, R, Java, Ruby, SQL, OCaml, Prolog, C++, Verilog
- **Tools and Frameworks:** NLTK, NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, Keras, MySQL, Git
- **Certified Courses:** Machine Learning by Andrew NG (Coursera, 2018), Machine Learning Accelerated-Computer Vision (Amazon, 2020)
- **Languages:** English (Fluent), French (Reading, Writing), Hindi (Fluent), Bengali (Native)

Service

- Placement Secretary of Student Council, Manipal Institute of Technology, 2016-2017
- Instructor, CurioCity (Manipal), an organization for teaching under privileged students, 2015-2016