Kanchan Chowdhury

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Research Interests

Machine Learning, Big Data Systems, and Geospatial Data Analytics

- **Research Direction**: Building noble systems for efficient processing and utilization of large scale geospatial and spatio-temporal data with applications to machine learning and deep learning techniques.

Education

- **Arizona State University** — Tempe, Arizona
  PhD in Computer Science (CGPA: 3.95) — *Aug. 2018 – Jul. 2023 (Expected)*
- **Chittagong University of Engineering and Technology** — Chittagong, Bangladesh
  Bachelor of Science in Computer Science and Engineering (CGPA: 3.76) — *Mar. 2010 – Nov. 2014*

Experience

- **Arizona State University** — Tempe, Arizona
  Research & Teaching Assistant — *Aug. 2018 - Present*
- **Gagagugu PTE LTD** — Dhaka, Bangladesh
  Software Engineer — *Jan. 2017 to Jun. 2018*
- **Le Chef Plc** — Dhaka, Bangladesh
  Android Application Developer — *Jan. 2015 - Dec. 2016*

Publications

- Vamsi Meduri, **Kanchan Chowdhury**, Mohamed Sarwat; Evaluation of Machine Learning Algorithms in Predicting the Next SQL Query From the Future. *ACM Transactions on Database Systems (TODS)*, 2021
- Jia Yu, **Kanchan Chowdhury**, Mohamed Sarwat; Tabula in Action: A Sampling Middleware for Interactive Geospatial Visualization dashboards. *46th International Conference on Very Large Databases*, 2020.
- Vamsi Meduri, **Kanchan Chowdhury**, Mohamed Sarwat; Recurrent Neural Networks for Dynamic User Intent Prediction in Human-Database Interaction. *22nd International Conference on EDBT, 2019*
- **Kanchan Chowdhury**, Lamia Alam, Shyla Sarmin, Safayet Arefin, Mohammed Moshiul Hoque; A Fuzzy Features Based Online Handwritten Bangla Word Recognition Framework. *18th ICCIT*, 2015

Technical Skills

- **Languages & Databases**: Python, Java, C, C++, Scala, SQL, HTML, MySQL, SparkSQL, and SQLite
- **Others**: Apache Spark, PyTorch, Scikit-learn, Jupyter Notebook, Apache Sedona, Machine Learning and Deep Learning, Sequence Models, Data Distributions, Pandas, Spatial Data Analytics, Rest API, and Android SDK

Projects

- **Named Entity Recognition**: Experimenting state-of-the-art NER approaches with two popular datasets.
- **Hyper-parameter Optimization**: Comparing state-of-the-art approaches for searching the optimum hyper-parameters of a deep learning model, such as grid search and Bayesian optimization.

Participation and Awards

- Recipient of CIDSE Doctoral Fellowship at Arizona State University for the academic year 2018-2019.
- 2nd Runner-up at two national project competitions in Bangladesh: i) National Hackathon and ii) Mobile Application Code Hub in 2014 and also 6th at national Inter University Programming Contest in 2012.