# Manasa Jammi

Email: manasa.jm91@gmail.com
Phone: +44 7500608442

## About Me:

I am a Software engineer, with experience in Machine Learning and Research. I like working on challenging problems at scale. I am currently a part of the *Catalog Quality Team* at **Facebook Inc, London**.

## Experience:

| | |
|---|---|
| Apr '19 - Present | **Software Engineer** at Facebook, London |
| Dec'16 - Feb '19 | **Blue Scholar Research Software Engineer** at IBM Research, India |

## Education:

| | |
|---|---|
| Master of Science, Computer Science and Engineering*(2014-2016)* <br> IIT Kharagpur <br> Guide: Dr. Soumya K. Ghosh, Department of Computer Science and Engg., IIT Kharagpur | **9.58/10** *Dept Rank-1* |
| B.Tech in Computer Science and Engineering*(2009-2013)* <br> Heritage Institute of Technology, Kolkata, <br> West Bengal University of Technology | **8.65/10** |

## Skills:

| | |
|---|---|
| **Programming** | Proficient in • Java • Python • Hack <br> Acquainted with • Android • R • C • C++ • Matlab |
| **Web Languages** | • Javascript • HTML • CSS |
| **Database Query Languages** | • Hive • SQL |
| **Research** | • Natural Language Querying • Spatio-temporal Data Mining • Trajectory Pattern Mining |

## Select Projects:

**Product Data Experimentation framework [SWE]**

– Proposed and built a framework to experiment and measure value of inferred data vs merchant provided data

– Interacted with more than 5 teams, and integrated with their tech stack to enable seamless end to end experiments

– After POC, this area was staffed with 2 more engineers to join the workstream

**Multi-lingual text embeddings for Catalog Items [ML+SWE]**

– Built ML models to compute multi-lingual text embeddings for **20B** catalog items.

– Worked on the infrastructure to persist these embeddings using online prediction at **10k QPS**

– Used these embeddings to improve clustering of similar items-¿ lead to **5%** recall gain over productionized models.

**FINESSE - Framework for Instantiating NLQ ESSEntials** *(Jan 2017 - December 2018)*

– Built an end to end system for instantiating the existing Natural Language Querying System at IBM Research– worked on orchestrating among all the components and built and exposed Swagger APIs for the entire process.

– Demo link

– (*Accepted as a Demonstration Paper at VLDB '18*)

**Determining Mobility Summaries of Individuals from GPS Traces** *(March 2015 - December 2016)*

– Built a framework to mine the Spatio-temporal movement summary of individuals from their location traces. Created a visualization demo and extended the framework for next-location prediction.

– (*Won the **Best Poster Award** at the Intern Poster Open House Session at IBM India Research Labs, Bangalore, India.*)

## Patents:

– **Disambiguating NLQ interpretations with Answers By Example** *(US Patent No -US20190303473A1)*

– **System and Method for Automated Testing of Natural Language Interface to Knowledge Bases** *(US Patent No -US20200073787A1)*

– **System and Method for generating Nested Structured queries from Natural Language** *(US Patent No -US20200073983A1)*

– **Natural Language Query Generation Equivalent to Click through Navigation** *(Waiting for patent number)*

– **Automatic NLIDB update using minimal user feedback** *(Waiting for patent number)*

## Publications:

– **ACM SIGMOD '19– Natural Language Querying of Complex Business Intelligence Queries**, ACM SIGMOD, June 2019, Amsterdam, The Netherlands
*Jaydeep Sen, Ashish Mittal, Manasa Jammi, et al.*

– **VLDB '18– A Framework for instantiating NLQ Essentials**, 44th International Conference on Very Large Databases, VLDB 2018 (Demo Track), Rio de Janeiro, Brazil.
*Manasa Jammi, Jaydeep Sen, Ashish Mittal, et al.*

– **COMSNETS '16- TrajSummary: Mobility Summary of Individuals**, COMSNETS 2016, Bengaluru, India.

## Other Projects:

**Building a framework for facilitation of Location Based Services** *(Jun'13 - Jul'14)*

– Developed an android application for Point Data Updation of Geographic Maps using OGC compliant standard GeoSMS.

– The application has been deployed by the Department of Science and Technology, India, at a National Level, and the pilot deployments at Barnala and New Delhi have been successful.

**Accident Reporting System using GeoSMS** *(Jan'14 - Jul'14)*

– Extended the GeoSMS framework for Accident Reporting, and built an application which will be used by the Police Officials.

– *(Secured 2nd Position at IBM iCare- National Technical Challenge 2014 for the above)*

**Accident Data Analysis using Spatial Decision Trees** *(Jul'14 - Dec'14)*

– Coded an analysis system for the accident data collected from the application mentioned earlier, to predict the occurrence of accidents. Tested using historic accident data on the NH4 National Highway.

– *(Accepted at IEEE ICIIS, 2014)*

**Spread of Information and finding Top-K influentials in a social network** *(Jan 2013 - Jan 2014)*

– Worked on a problem which can be generalized as k-hop dominating set problem, where a maximum of k hops will be allowed to spread the information among all the nodes of the graph.

– *(Submitted and under review at the Information Processing and Management Journal)*

**Determining Maximal Common Subgraphs in Geometric Graphs** *(Jun 2012 - July 2012)*

– Worked on the problem of finding similar road structures given the street maps of two cities. The problem is a variant of finding the most frequent similar subgraphs, given two geometric graphs.