Abhishek Niranjan

http://abhishek-niranjan.github.io

Email : abhishek.niranjan.iitkgp@gmail.com
Mobile : (+91)-8513902048

EDUCATION

- **Indian Institute of Technology(IIT)**   Kharagpur, India
  Bachelor + Master of Technology in Computer Science; CGPA: 7.98/10.0   *July 2013 – July 2018*
- **Kendriya Vidyalaya**   Jodhpur, India
  AISSCE (Grade XII); Percentage: 93.6%   *Apr 2011 – Mar 2012*

EXPERIENCE

- **Samsung Research Institute**   Bangalore, India
  Senior Software Engineer   *Jun 2018 - Present*
  - **Voice Intelligence**: Bixby is a voice assistant indigenous to Samsung smart devices. As a part of *Automated Speech Recognition(ASR)* team, I built *Hierarchical Attention based Transformer*, a sequence-to-sequence architecture to improve results of *Grapheme2Phoneme* conversion module.
  - **Grammatical Error Correction(GEC)**: Currently working towards on-device textual processing module in smartphones to assist voice and keyboard enabled services; approaching the GEC problem as a sequence-2-sequence task with (hypothesis, reference) as the (source, target) sentence pair.
- **Amplus Solar**   Gurgaon, India
  Data Science Intern   *May 2017 - July 2017*
  - **Soiling Rate**: Photovoltaic plants experience soiling phenomena which results in decrement of power generation. Developed an algorithm to compute the soiling rate from limited data to devise a *cost-optimized* cleaning schedule of solar plants.
  - **Power-Generation Forecasts**: Engineered a forecasting module to predict hourly active power generation by a PV plant using *gradient boosted trees.* achieving a correlation of 0.97; Augmented the feature set by utilizing OpenWeatherMap API.
  - **Power-BI Reports**: Automated the generation of daily visualization reports of Solar Plants portfolio in *Power BI* by connecting MySQL server hosted on AWS EC2 instance. Built a GUI application using *PyQt*4 to facilitate the data downloading from multiple dashboards.
- **Bidgely Technologies**   Bangalore, India
  Data Science Intern   *May 2016 - July 2016*
  - **Vacation Detection**: Bidgely's energy disaggregation technology helps consumers and utilities to adopt eco and pocket friendly consumption. Devised a sliding window algorithm to predict the vacation instances of the residents in *MATLAB with precision >95% and recall >70%,* which got incorporated into production
  - **Refrigeration Consumption**: Worked on the energy disaggregation module to compute refrigerator consumption from low resolution energy data, which was pushed to disaggregation pipeline.
- **Outsy Inc.**   Mumbai, India
  Application Developer Intern   *May 2015 - July 2015*
  - **Information Retrieval**: Outsy is a lifestyle and event recommendations android application. Extracted artists' names from 15,000 Facebook textual posts using *Stanford POSTagger* after NLTK assisted pre-processing; Generated artists' profile database using *Wikipedia API, Youtube API, and SoundCloud API.*

PUBLICATIONS

- **Drift in Online Social Media**: *IEEE 9th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2018*
- **Citation Sentence Reuse Behavior of Scientists: A Case Study on Massive Bibliographic Text Dataset of Computer Science**: *Proceedings of the 17th ACM/IEEE Joint Conference on Digital Libraries (JCDL), 2017*

PROJECTS

- **Scientific Document Clustering Based on Key-phrases**: Focused on studying how the popularity of different tasks and techniques related to NLP Research emerges/varies with time as a part of Master's Thesis.
- **Sign Language Translation**: Translation of American sign language gestures to text using flex sensing gloves.
- **Data Extractor from 2D Plots**: A graph extractor that detects plots in any PDF and digitizes the graphs.
- **Optimal Bidding**: Cost optimization algorithm employing solar power prediction to manage a gated community's electricity requirements; Our algorithm secured 1st place in the Inter-IIT 2018 data science competition.

SKILLS

- **Languages**: Python, C++, SQL
- **Frameworks & Libraries**: TensorFlow, PyTorch, Keras, Scikit-learn
- **Softwares & Tools**: MATLAB, Tableau, Power-BI, Git
- **Documentation**: LaTeX