Abhinav Bhandari

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Education

McGill University   Montreal
BA Computer Science (Major), Economics (Minor)   Sep, 2014 - May, 2018

Experience

Softbank Corp   Tokyo
Software Developer   Oct, 2018 - Present

- Developed a rule-based FAQ chatbot, using Dialogflow, FireBase and Google Cloud Platform for Slack, in Python. Designed to handle multiple custom intents and entities from a user's input.
- Implemented an automated question answer generation tool using bi-directional LSTM based on a research paper.
- Developed a Python library for analysing geolocation data that using geohash, locality sensitive hashing and clustering.

Network Dynamics Lab, McGill University   Montreal
Social Informatics Researcher   May, 2018 - Sep, 2018

- Analysed hateful (banned) subreddits and their users' language use. I examined the relationship between community specific slang and topics discussed by users through Gibbs Sampling, and LDA. Also used Morfessor and implemented a slang approximation algorithm in Python.

Mentor Infolytica, a Siemens Business   Montreal
Software Developer (Intern)   May, 2017 - Aug, 2017

- Implemented an object oriented electric circuit simulator in C++, with libraries such as armadillo for matrices and boost. Heavy focus on design patterns (e.g, Factory Pattern, Decorator Pattern).

Rakuten Travels   Tokyo
Software Developer (Intern)   May, 2016 - Aug, 2016

- Contributed to the development of an API, in Java 8, that optimizes flight search and vacation package search based on client and user requirements for the Travel department of the largest e-commerce company in Japan. Authored around 20 Java classes and worked in an Agile setting.

Projects

Research Paper on Slang on Reddit *Python (Spacy, Pandas, Numpy, Word2vec)*
Examined characteristics, such as named entity recognition and semantic shifts, of slang terms in online communities. Over 2 Terabytes of data was analysed using GNU parallel processing, and I wrote an open-source package for slang analysis in Python. Research paper was accepted for publication and oral presentation at W-NUT, EMNLP 2019).

Research task on Jeopardy Dataset *Python (Nltk, Scikit Learn)*
Predicted Jeopardy (TV-Show) question categories using n-gram classifiers. Showed that stopwords are effective signals of categories for short texts (15 words), and that the sequence of Question + Answer is more grammatically coherent than Answer + Question.

A Markdown Blog *Angular, Firebase, (Typescript, HTML, CSS)*
A CRUD blog that uses a markdown editor to make blog posts using Firebase Storage and Angular. The blog supports update and delete functionalities for an authenticated user.

Synthboard *Angular, Canvas (HTML5), Animejs, (Typescript, HTML, CSS)*
A online music keyboard that plays notes with a display of animated colours. Developed using HTML5 Canvas, Angular and Animejs.

Award

Best Research Paper Award   W-NUT, EMNLP 2019