Apoorva Bhatnagar

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TECHNICAL SKILLS

- Programming Languages : Java, C#, Python, ASP net core
- Web development : JavaScript, TypeScript, Node.js, Micro-services, HTML5, CSS, AngularJS, Tableau
- Frameworks : Dot Net Core framework for C#
- ML Technologies : Supervised (Naïve Bayes, Decision Trees, NLP, Neural Net, BERT), Unsupervised (K-means clustering)
- Databases : MySQL, No SQL databases – MongoDB, CosmosDB
- Design and architecture : Restful APIs, MVC web apps, Service Oriented Architecture, Single Responsibility principle, Agile dev

EDUCATION

Master of Science in Computer Science **GPA: 3.80/4.00** *Sept 2019 – Expected grad date May 2021*
University of Washington, USA

Bachelor of Science in Computer Science **GPA: 3.80/4.00** *Aug 2011 – May 2015*
Guru Gobind Singh Indraprastha University, India

Bachelor of Science in Food Science Management **GPA: 3.89/4.00** *Sept 2015 – Jan 2018*
Johnson & Wales University, USA

ACADEMIC PROJECTS

Auto Documentor *Aug 2019 – Present*

- Developing an ML based solution for auto detecting question-answer pairs in a user's emails for the purpose of documentation. Once discovered, the result set is displayed to the user and if approved, the content will be added to a wiki.
- A multi layered ANN was used to classify sentences as questions. Model trained on SQUAD 2.0 and NPS chat dataset.
- The system then converts each sentence to a vector using Facebook's Infersent implementation and then uses cosine similarity and sentence structure semantics to identify candidate sentences as answers.

Google File System, *Aug 2019 – Present*

- Developing a micro implementation of the google file system to better understand the architecture complexity of GFS.
- The system has a GFS master, multiple GFS chunk servers and clients to stream large sized files over a network that is assumed to be prone to network failures, disk failures and packet losses.
- The model respects GFS's NFP of scalability, reliability, performance and availability.

CAPTCHA Defeater *Aug 2019 – Present*

- A multilayer deep neural network was used to classify images as numbers. Model was trained on USPS handwritten digits dataset. The dataset has 14 features which were further reduced, and the data was divided 10-fold to train the model.
- The trained model was then used to predict which image corresponds to which number and was used to defeat a basic CAPTCHA system that is often used to differentiate between humans and bots.

EXPERIENCE

Software Engineer/Freelancer – NetGen Technology
Weather Application *Jul 2018 – Jan 2019*

- Built a weather application using Google location API and Dark Sky API to find location information and provide localized weather updates. An observer-subscriber push notification pattern was used to distribute data from sensors to clients.

Software Engineer/Freelancer- Growthfountain.com
Stock Quotes Scrapping Algorithm, Trade Analyzer *May 2016 – Jul 2018*

- Developed a stock price quotation micro-service that fetched prices from a broker API. Used C# to implement the web API.
- Fed the prices to the project's trading engine via message bus. Later switched over to use Azure bus for the project.

Internship – India Meteorological Department
Throughput, Reliability and Availability Reporting of a highly-distributed network *May 2013 – Jul 2013*

- Created a runner process that executed every 20 minutes and performed a full network inspection by evaluating all the cluster nodes and network connected hubs for availability. The data was used to power globally accessible live reports.

Volunteer – Pratham Education Organization
Accessible Social Networks *Feb 2014 – Aug 2015*

- Analyzed and tested major social network sites such as Facebook and Twitter for accessibility with both automated tools like 508checker and the AATT (automated accessibility testing tool) which can crawl unauthenticated public web pages, and with visually impaired user groups from the NGO.

LEADERSHIP EXPERIENCE AND INTERESTS

- Executive editor for the JWU North Miami campus magazine: Designed the front cover and the entire layout of the magazine, decided on the content and reviewed the work of hundreds of students who contributed to the magazine.
- Student Assistant at Student Conduct JWU- North Miami: Worked on conduct cases, making student records and files and working alongside with Campus Security, Dean of Student Affairs and the Director of North Miami campus.

HONORS AND AWARDS

- Awarded Gold Key and elected to the membership of the Alpha Beta Kappa National Honor Society for outstanding academic accomplishment from Johnson & Wales University.