

GURPREET SINGH BHATIA

gsbhatia93@gmail.com | New Delhi, India | +91 9650613067

EDUCATION

Bachelor of Technology, Information Technology; GPA: 3.74
University School of Information, Communication and Technology (USICT)
Guru Gobind Singh Indraprastha University (GGSIPU)

August 2011 - July 2015
New Delhi, India

PROFESSIONAL EXPERIENCE

Research Associate, Indraprastha Institute of Information Technology (IIIT-D)
(Advisor Prof. Ponnurangam Kumaraguru)

October 2017 - Present
New Delhi, India

- **Spam Campaign Characterization**
 - Studied technical support spams which advertise phone numbers on social media platforms by analyzing over 23 million tweets to differentiate spam and legitimate.
 - Built a model to classify spammers using Random Forest classifier, L2 Regularization; Precision = 99.8%.
 - Our work resulted in a framework to detect and suspend phone-based spammers on Twitter.
- **Digital Signals on Stack Overflow**
 - Our work focussed on understanding what virtual rewards signal about the social qualities of users on Stack Overflow.
 - We identified evidence of positive correlation between reputation scores and badges, and social attributes *Popularity* and *Impact* of the user.
 - Applied Gradient Tree Boosting Regression to model rich dataset of 3.8 Million users;
 $R^2(Popularity) = .956$ and $R^2(Impact) = .858$.
- **Advanced Analytics for Social Media Analysis (AASMA)**
 - Lead developer for large-scale data mining tool to monitor public data from social media; scaled the project from 50 to 100+ government agencies in India in one year.
 - Implemented functionality for Image Virality, Video Analysis, and detecting Codemixed content.
 - Transitioned application environment to Docker containers at production servers.
 - Conducted workshops and user training programs for AASMA.
- **Detecting trolls in Social Media**
 - Presently working to develop a cross-platform computational model to detect trolls in online communities using low level textual features and changes in network characteristics in the event of trolling.

Associate Technology L1, Sapient Consulting

April 2016 - July 2017
Gurgaon, India

- Worked as a software developer providing technical solutions for US-based Asset Management clients.
- Built Data Integration framework with Publisher/Subscriber format that provides a middleware platform for communication between proprietary systems.
- Implemented dashboard (web front-end component) for the middleware system which provides easy access to daily transactions and file exchanges happening in the integration framework.
- Skills: MVC, RESTful architecture, finance, and trading.

Software Developer, Troofal Interactive

August 2015 - March 2016
New Delhi, India

- Developed digital solutions for clients by building their online software services and portfolios.
- Built a responsive web application with Asynchronous I/O Programming with callbacks and Async/Await.
- Implemented server-side business logic and also built a Chrome Extension to send notifications to users.
- Skills: Node.js, MongoDB, JavaScript.

Web Development (Freelance), FalconLedLights.com

May - June 2014
New Delhi, India

- Built a user-friendly website to which would allow users to easily navigate through content and view relevant details.
- Skills: Bootstrap, JavaScript, jQuery and HTML/CSS.

Internship, WeChat

June - July 2014
New Delhi, India

- Worked as an intern contributing to WeChat's overall product improvement. Activities involved feature testing, networking and providing feedback on the Android application for mobile phone operations.

PUBLICATIONS

[1] Merchant A., Shah D., **Bhatia G**, Ghosh A., Kumaraguru P. “Signals Matter: Understanding Popularity and Impact of Users on Stack Overflow”, Short Paper, The Web Conference 2019 (WWW), 20% acceptance.

[2] Gupta, S., **Bhatia G**, Suri S., Kuchhal D., Gupta, P., Ahamad, M., Gupta, M., and Kumaraguru, P. “Under the Shadow of Sunshine: Characterizing Spam Campaigns Abusing Phone Numbers Across Online Social Networks” (Submission under review), Journal of Web Science 2019.

SELECTED PROJECTS

Video Analysis (AASMA)

- Integrated the model for video analysis and provided support for uploading videos to the Rails application.
- For non-GPU servers, added support to poll a GPU server with RPyC then transfer data to it and run the model.

DeepTraffic

- Participated in a competition, part of Deep Learning for Self-Driving Cars course.
- Used deep reinforcement learning that to create a neural network that drives a vehicle as fast as possible through dense highway traffic (virtually); Top speed achieved = 68.7 MPH (qualifying = 65 MPH).
- Skills: ConvNetJs, Deep Q Learning

Virtual Topology Router

- Built a router that handles real ethernet packets implementing network protocols like Ethernet, IP, ICMP, and ARP.
- Skills: Mininet, POX, GDB debugger, Wireshark

Route Optimization using Ant Colony Optimization

- Developed a meta-heuristic algorithm influenced by a biological process carried by ants for finding the best path.
- Skills: Java, Swarm Intelligence

TECHNICAL SKILLS

Programming: Python, C, NodeJS, Java, JavaScript

Web Development: AngularJs, Ruby On Rails, HTML, CSS

Database: Oracle SQL, PL/SQL, MongoDB

Tools: SVN, Oracle WebLogic, Apache Storm, Celery, Redis, Git, Docker

Frameworks: Spring MVC, JDBC, Swing, AWT, TensorFlow, Numba