875 W, 23rd Street,
Los Angeles, CA – 90007

Pratik Varshney

https://www.linkedin.com/in/varshneypratik

+1-213-284-5788
pvarshne@usc.edu

Education

Los Angeles, CA, USA **University of Southern California** **August 2016 - May 2018**

- **Master of Science, Computer Science**
- Relevant Courses: Analysis of Algorithms, Foundations of Artificial Intelligence, Applied Natural Language Processing, Information Retrieval and Web Search Engines, Machine Learning (In Progress), Deep Learning and its Applications (In Progress).
- Current GPA: **4.0 / 4.0**

Aligarh, Uttar Pradesh, India **Aligarh Muslim University** **August 2011 - June 2015**

- **Bachelor of Technology, Computer Engineering**
- Cumulative Performance Index: **9.58 / 10** (Rank 5)

Technical Skills

- **Programming experience:** C, C++, JAVA, JavaScript, Node.js, MATLAB, Python, HTML, CSS and JSP.
- **Technologies / Tools:** SQL, NoSQL (Aerospike, Redis and DynamoDB), Bash, Git, Vim, LaTeX, Spring (MVC), Lombok, Mockito, Web Servers based on Apache MINA, NGINX, Quartz Scheduler, Elasticsearch (Logstash and Kibana), scikit-learn and Tensorflow.
- **Competitive Programming:** Solved hundreds of programming problems on Sphere Online Judge (SPOJ), Project Euler, LeetCode, HackerEarth, HackerRank, Google Code Jam, CodeChef, etc. https://bitbucket.org/pratikvarshney/competitive-programming

Work Experience

Software Development Engineering Intern **Amazon** **May 2017 - August 2017**

- **Debugging Console:** Developed a web application to aggregate data from dynamoDB tables, state machines and other background processing services and display their processing status along with debugging information to help troubleshooting these services.
- **Message Publisher:** Programmed a web tool to collect data from user and publish it to a message queue for further processing.

Software Engineer **Paytm (One97 Communications Ltd.)** **June 2015 - July 2016**

- **Pre-Auth / Capture flow:** Implemented Pre-Authorization and Capture flow for Credit Card transactions allowing customers to authorize payment and merchants to capture payment separately.
- **Message Translation Web Server:** Developed a real time financial message translation application capable of handling more than 1000 requests/second.
- **SQL Database to NoSQL Database Data Migration Application:** Made a multi-threaded application capable of migrating over 100,000 records in less than 10 seconds.
- **SQL Query Optimization:** Achieved up to 10 times speed up in querying data generated by over a million transactions per day.
- **Scheduler Application:** Developed report scheduling application which handled and delivered multiple reports with over 1,000,000 of records without choking the real time payment gateway transactions being catered by the same resources.
- **API Based Merchant On-boarding System:** Created an API based merchant on-boarding system to allow 3rd party merchant onboarding applications like Salesforce to integrate with Paytm.
- **Code Refactoring**: Refactored the existing code of a module to enforce Model-View-Controller Design Pattern.

Projects

- **Doneth** (2017): Decentralized blockchain application to allow donating cryptocurrency to Refugees using Ethereum network. Built during the hackathon (dAppathon) organized by BCG Digital Ventures and DVolution. Truffle framework
- **Hindi News Categorization and Summarization** (2017)**:** Developed an application which utilized deep neural networks to categorize and summarize news articles (Report). Python
- **AI Game Agent** (2016). Developed an AI Agent for 2-Player turn based game and a game server to allow competing 2 agents. C++
- **Computational modeling of decision making in Stem cells** (2015). GUI application to model 3D spatiotemporal dynamics of hierarchical cell division and lineage specification in stem cells (Report). C++, Java, MATLAB, Python
- **BioMetric Data Acquisition Application** (2014). GUI application for Face Detection/Extraction, Recognition and Fingerprint Detection/Extraction using OpenCV and Qt library. Used by Aligarh Muslim University for biometric data collection. C++, Qt
- **MultiTest and MOST Framework** (2014). Implemented a paper (by Oya Aran, et al.; "An incremental framework based on cross validation for estimating the architecture of a multilayer perceptron"; International journal of Pattern Recognition and Artificial Intelligence, Vol.23, No. 2 (2009), 159-190) and analysed its performance on credit card fraud dataset (Report). MATLAB
- More at https://pratikvarshney.github.io/ and https://bitbucket.org/pratikvarshney

Additional Experience and Awards

- Won the **"LA Hacks Top 4 - 11" award** out of 150+ Teams in LA Hacks 2017 held at UCLA. (2017)
- Won the **"Most Viable Startup Hack" award** at TrojanHacks 2.0 held at University of Southern California. (2017)
- Awarded **1st prize** in Gang Wars (2-Player turn based game) AI Agent Competition against 61 agents held at USC. (2016)
- Winner of BlackBerry 10 App Challenge organized by Devworx. Won BlackBerry Z10 Smartphone and Playbook. (2013)