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PRATIK VARSHNEY

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EDUCATION

Master of Science, Computer Science   **August 2016 - Dec 2017**
University of Southern California - Los Angeles, USA   GPA: **3.9 / 4.0**

- Courses: Analysis of Algorithms, Foundations of Artificial Intelligence, Applied Natural Language Processing, Information Retrieval and Web Search Engines, Machine Learning, Deep Learning and Its Applications.

Bachelor of Technology, Computer Engineering   **August 2011 - June 2015**
Aligarh Muslim University - Aligarh, India   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, Apache MINA, NGINX, Quartz Scheduler, Elasticsearch (Logstash and Kibana), Scikit-learn and Tensorflow.

WORK EXPERIENCE

SDE Intern   **Amazon**   **May 2017 - August 2017**

- **Debugging Console:** Built 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**: Developed a web tool to collect and publish data to a message queuing service for further processing.
- **API Clients:** Created client libraries to access databases, workflow services and other 3rd party service APIs.
- **Code Refactoring**: Moved repeated code from various modules to common libraries to improve code reusability and added test cases in these libraries to improve their code coverage from around 85% to nearly 95%.

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 per second.
- **SQL Database to NoSQL Database Data Migration Application:** Made a multi-threaded application capable of migrating over 10,000 records per second.
- **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.

PROJECTS

- **Multi-Speaker Recognition and Speaker Specific Question Answering System** (2017): In this project, a text independent multi-speaker recognition system and speaker specific question answering system was developed were people can ask question and get answers specific to their knowledge. Python, MATLAB
- **Snipe** (2017): Snipe is an application which can help identifying suspicious activities like person carrying a gun, trying to shoot someone, or actually shooting someone and inform the police regarding such events. Built and pitched at Cal Hacks 4.0. C++, Python, OpenCV, NEC Sound Recognition APIs, Microsoft Cognitive Services APIs
- **Doneth** (2017): Decentralized blockchain application to allow donating cryptocurrency to Refugees using Ethereum network. Built and pitched during 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. Python
- **Modeling 3D-spatiotemporal dynamics of hierarchical cell division** (2015). GUI application for computational modeling of decision making in stem cells. **Published** in Journal of Modeling and Simulation (JoMS), http://joms.kpublishinggroup.info/. 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 AMU for biometric data collection. C++, Qt
- More at https://pratikvarshney.github.io/ and https://bitbucket.org/pratikvarshney

ADDITIONAL EXPERIENCE AND AWARDS

- Grader for CSCI 561 - Foundations of Artificial Intelligence at University of Southern California. (Sept 2017 - Dec 2017)
- Won the "**Best Presentation Project Team**" award for Deep Learning and Its Applications. (2017)
- Won the "**Best Use of NEC API**" award at Cal Hacks 4.0 held at University of California, Berkeley. (2017)
- Won the "Amazon Echo Dot" for developing Alexa Skills.
- 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 Competition against 61 agents held at USC. (2016)
- Winner of BlackBerry 10 App Challenge organized by Devworx. Won BlackBerry Z10 Smartphone and Playbook. (2013)