

Ashish Rana

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EXPERIENCE

- **American Express** *Next Generation Data Management Team, Bengaluru*
Data Engineering Intern *Jan 2019 - Present*
 - **Automation, Data pipeline and Administrative Scripts** : For monitoring stats of Couchbase VMs, multiprocessing VM patching and automating post provisioning steps. Reducing resource consumption upto 50 to 90 % for multiple tasks.
 - **Researching Next Generation Cloud Databases**: Benchmarking their results & architecture analysis with current existing industrial datastores.
 - **Research & Development of Database Monitoring Tools***: Graphana & Splunk visualization with Elasticsearch & Prometheus datastores with Python, Ansible & Golang scripts.
 - **Extra Initiatives**: Built a clustering based recommendation system and In-house human technical resource helper tool by scraping Confluence pages for CIO's presentation. Working with multi-disciplinary teams and developing business use-case understanding. Planned and organized intern outings, birthdays & farewells.
- **GE** *Product Lifecycle Management COE Team, Bengaluru*
Software Engineering Intern *Jun 2018 - July 2018*
 - **ReST Web-Services**: Implemented ReST web-services from legacy SOAP with microservices compatible concept.
 - **SSO SAML Authentication**: Resolved logout and reauthentication issues, increased the use case coverage.
 - **Static Tool Analysis**: POC case study w/ multiple tools and Enterprise scale solutions designed, github contributions to original tools.
 - **UI Enhancements**: Dialog box help designed and implemented with custom library compatible code, reduces user effort.
 - **Functional Learnings**: Business understanding for application user base of 40,000, international team meetings, presented curriculum and solutions with extensive documentation, gap analysis, stretch assignments initiative.

RECENT ACHIEVEMENTS

- **Global Rank: 210, October Mega Cook-Off 2018**: achieved on Codechef coding platform for username rana.160796.
- **Author, TowardsDataScience & AnalyticsVidhya**: Published several articles on Deep Learning, ML, AI and Reinforcement learning with 38K+ views and 225+ unique recommendations.

SELECTED PROJECTS

- **Clustering Based Online Recommendation System**: Based on course data from Pluralsight a clustering and LDA based recommendation system that uses elbow method for finding approximate number of cluster to minimize SSE.
- **CheckerFramework, Contributor**: 2500+ lines of code committed, for jdk annotations. Created prototype type system for determinism in code. Minor contributions, other tools and case study done for Enterprise applications.
- **Optimization Algorithm GUI**: Convergence calculations for multidimensional fitness functions. Algorithms available like DE, GA, PSO, Random Walk. Extra comparative python implementation for efficiency comparison.
- **Aimacode, Contributor**: Contributing AI pseudocode algorithms. Specification Issues raised for aimajava.
- **Markov Chain Music Generator**: Music generation of Indian classical music with finite visible markov chains with *mido*.
- **Deep Vision Tool: Final Year Project**: Deep learning deployment solutions with Desktop based GUI and custom E-mail based replies for VQA based object classification & Activity Classification module.
 - **Chatbot Module**: NLP query helper Chatbot with LSSVM based intent detection decision flows and encoded personality.
- **TreasureHunt App**: Zbar library for QR code scanning used. With puzzle editability and test concurrency for 400 users.

SKILLS

- **Languages**: Java(*Proficient*), Python(*Proficient*), Ansible, R, Shell Scripting, C, C++, SQL, PL/SQL, JS, jQuery, MatLab, UML, ARM, Verilog, 8085, 8086, Arduino , **Technologies**: Scikit-learn, Tensorflow, PyTorch, NetworkX, nltk, Tkinter, Git, Linux, Static Analysis Tools, SAML, SiteMinder, Jekyll, Adobe Suite, Microsoft Suite

COURSES

- **Elective**: Deep Learning, AI Search Methods, ML, NLP, Data Analytics, Data Mining, Social Networks, Cloud Computing , **Core**: Image Processing, Advanced Data Structure And Algorithms, Software Engineering, Information Management, Numerical Analysis, Optimizations, Discrete Mathematics, Networking, OS, TOC, Compilers, Computer Architecture, Microprocessors, Embedded Systems

CO-CURRICULARS

- **OWASP: Design Head**, produced sophisticated and professional designs with Photoshop suite.
- **MARS(*Robotics Society*): Core Team**, Conducting workshops on maze-solvers, Arduino and advanced C++.
- **Scimatics: Mentor, Design Head** Conducting workshops on Java, C++, Arduino, graphic design. Mentoring juniors and Event management.
- **Voluntary Experience:** Destitute homes and Orphanage visits, Blood donor and Charity participation in college.
- **Academics:** Gold Medalist: Social Network(*NPTEL-Course*), Gold Medalist: First Year(*Branch*), Gold Medalist: School IMO

EDUCATION

- **Thapar Institute of Engineering and Technology** Patiala, Punjab
Computer Engineering, CGPA: 9.45 2015 – Present
- **Army Public School** Meerut Cantt, U.P : Jalandhar Cantt, Punjab
12th, Percent: 91.00 : 10th, Percent: 93.10 2013 – 2014 : 2011 – 2012