Ashish Rana

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EXPERIENCE

- **GE Healthcare** — Product Lifecycle Management Development Team, Bengaluru
  Software Engineering Intern, GE Digital — *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.
  - **UI Enchancements**: Dialog box help designed and implemented with custom library compatible code, reduces user effort.
  - **Functional Learnings**: Business understanding, international team interactions, gap analysis, stretch assignments.

SELECTED PROJECTS

- **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.
- **TreasureHunt Game App**: Uses Zbar library for QR code scanning ability. Puzzle editability in admin mode available.
- **Aimacode, Contributor**: Contributing AI pseudocode algorithms. Specification Issues raised for aima/java.
- **Markov Chain Music Generator**: Music generation of Indian classical music with finite visible markov chains w/ *mido*.
- **Deep Vision Tool: Final Year Project, *In Progress***:
  - **Chatbot Module**: NLP Chatbot with flows, personality. For handling use cases like troubleshooting problems, recruiting.
  - **Object Classification Module**: CNN trained, used for product and brand identification, similar suggestions from DB.
  - **Activity Classification Module**: RNN trained, applied for visual aid with auto-recite submodule in it.
  - **Depth Analysis Module**: CNN trained for relative depth estimation. For use cases like visual aid, image depth map.

EDUCATION

- **Thapar Institute of Engineering and Technology** — Patiala, Punjab
  Computer Engineering, CGPA: 9.42 — *2015 – Present*
- **Army Public School** — Meerut Cantt, U.P
  12th, Percent: 91.00 — *2013 – 2014*
- **Army Public School** — Jalandhar Cantt, Punjab
  10th, Percent: 93.10 — *2011 – 2012*

SKILLS

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

COURSES

- **In Progress:** Deep Learning, Blockchain and Industrial Use Cases, Mathematical Puzzles, Compilers **Elective:** AI, ML, NLP, Data Analytics, Social Networks, Search Methods in AI, Cloud Computing **, Core:** Image Processing, Advanced Data Structure And Algorithms, Software Engineering, Information Management, Numerical Analysis, Optimizations, Discrete Mathematics, Networking, OS, TOC, Computer Architecture, Microprocessors, Embedded Systems

CO-CURRICULARS

- **OWASP: Design Head,** leadership for producing sophisticated and professional designs on Photoshop suite.
- **MARS(*Robotics Society*): Core Team,** Conducting workshops on maze-solvers, Arduino.
- **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