Gauri Kholkar

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ACADEMIC DETAILS

SPECIALIZATION	UNIVERSITY	INSTITUTE	YEAR	CGPA
B.E.(Hons.) Computer Science	BITS Pilani	BITS Pilani Goa Campus	2017	8.30/10
Science	Goa State Board	St. Xavier's Higher Secondary School Goa	2013	95.83
General	Goa State Board	New Goa's G.S Amonkar Vidya Mandir	2011	93.67

FIELDS OF INTEREST

- Machine Learning, Information Retrieval, Compilers

ELECTIVES/TECHNICAL PROFICIENCY

- **Electives** - Software Engineering, Information Retrieval, Neural Net And Fuzzy Logic, Parallel Computing
- **Languages** - C, C++, Java, Python, Shell Scripting, Verilog, SQL, Rust.
- **Tools** - Lex, Yacc, ModelSim Altera, Maven, Git.

MAJOR PROJECTS

- **Classification of Red Blood Cells(RBCs) using Fully Convolutional Neural Networks (FCNNs).**
  (March'17 - May'17)
  - **Aim** : Classify various sized images of RBCs using FCNN based U-Net architecture
  - **Technologies used** : Python, Keras Deep Learning Library
  - **Results** : Achieved 94% accuracy
- **Re-ranking Search Results**
  (Guide: Dr. Bharat Deshpande, Feb'16 - May'16)
  - **Aim** : Develop a User Recommendation System which re-ranks Google search results based on bookmarks and history of an individual.
  - **Technologies used** : Python, scikit-learn
  - **Results** : Achieved 93% accuracy based on feedback from the test population of 100+ students.
- **Study of OET-KNN and its applications in biological classification problems.**
  (Guide: Dr. Sukanta Mondal, Feb'16 - May'16)
  - **Aim** : Study and analyze the Optimized Evidence Theoretic K-Nearest Neighbour (OET-KNN) method for protein structure prediction (follow-up on my previous project involving usage of ILP)
  - **Technologies used** : Python, scikit-learn
  - **Results** : Successfully implemented and analyzed results of an approach mentioned in a research paper. Used the learnings to replace existing ILP based approach for protein-ligand binding prediction yielding an increase of 5% in accuracy.
- **Analysis of feature selection techniques for text categorization problem**
  (Feb'16 - May'16)
  - **Aim** : Implement feature selection techniques on a text categorization problem.
  - **Technologies used** : Python, Gensim
  - **Results** : Tested and compared the performance of Comprehensive Measure Feature Selection (CMFS) and Improved Global Feature Selection Scheme (IGFSS) techniques on 20NG dataset.
- **Identification of heme-protein interaction using Inductive Logic Programming (ILP)**
  (Guide:Dr. Sukanta Mondal, Aug'15 - Dec'15)
  - **Aim** : Analyze the structural and sequential information of proteins to predict heme-binding sites.

- **Technologies used** : Python, Prolog
- **Results** : Generated rules to define the binding by using an ILP System.

WORK EXPERIENCE

- **Software Developer, Jivox Software**
  (July'17 - till date)
  - Primary owner of company's recommendation solution for personalized advertisement generation.
  - Involved in Data Management Platform integration by processing big data using Scala and Java.

- **Design and Implementation of error messages in the Rust Compiler**
  (Guide: Dr. Nicholas Matsakis, March'17 - till date)
  - Designed and implemented simple and concise messages pertaining to lifetime errors. This is a challenging problem because the errors result from inference, so pinpointing the source of the error is not always straightforward.
  - Incorporated the feedback received from the users from various releases to improve the designs further.

- **Software Developer Intern, Amazon**
  (July'16 - Dec'16)
  - Launched the Compliance Visibility Dashboard for the Carrier Portal successfully by fixing bugs, securing the access to ElasticSearch and setting up the prod stack within a given timeline.
  - Implemented a part of the authorization model for the Internal Amazon Carrier Facing Web Portal.
  - Designed and implemented a cost-effective and efficient solution for the Document Archival System within Amazon Transportation by using technologies like AWS DynamoDB, SQS, S3, Glacier and Event-Subscriber Model.

POSITION OF RESPONSIBILITY

- **First Degree Teaching Assistant**
  (Computer Programming, Probability & Statistics)
  - Assisted the Instructor In-Charge of Computer Programming in evaluating labs. Jan 2017 - May 2017
  - Assisted the Instructor In-Charge of Probability & Statistics in conducting evaluative components and making tutorial question sets. Aug 2015 - Dec 2015

ACHIEVEMENTS

- Selected as an Outreachy intern along with 38 other participants from among 250 plus applicants worldwide. I interned remotely under the Rust team at Mozilla - 2017
- Shortlisted for Aditya Birla Group Scholarships final round - 2013
- Scored the Highest Marks in HSSC Goa State Board with 95.83 Percent - 2013

EXTRA-CURRICULAR ACTIVITIES

- Member of Department of Journalism & Media Affairs and Literary & Debating Club.
- Participated in the National Science Drama Competition, West Zone India Finals.
- Won the 4th place in National Science Seminar, Goa-India Finals.