

Kinjal Jain

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EDUCATION

- **Birla Institute of Technology and Science, Pilani** Hyderabad, India
*Bachelor of Engineering (Hons.) in Computer Science; GPA: 9.69/10.0 (**Bronze Medalist**)* Aug 2013 - Jul 2017
- **Central Academy** Alwar, India
Senior Secondary School; Percentage: 94.2% Apr 2012 - Mar 2013

RESEARCH & WORK EXPERIENCE

- **Nutanix India Private Limited** Bengaluru, India
Member of Technical Staff - 2 Aug 2017 - Present
 - **Resource Deployment Manager (RDM):** Developed multiple Python based automation plugins for RDM which takes care of deploying resources based on hardware and software requirements of the qualification tests. Leveraged several tools like Docker for plugin containers and resource allocator services, Kibana for real-time reporting of resources in use, Ansible for deploying and updating RDM Web and API servers.
 - **VM Migration Utility:** Built a Virtual machine migration tool across AWS, Nutanix and Azure as part of a Hackathon project.
 - **CaaS in Xi, GCP:** Currently working on Cluster as a Service (CaaS) project for Nutanix based cluster deployment and release use-case on Nutanix Xi cloud environment and Google Cloud Platform.

Member of Technical Staff - Intern Jan 2017 - Jun 2017

 - **NuTest Framework:** Added REST and CLI based abstractions for various hypervisor agnostic entities of Nutanix product in test automation framework using advanced pythonic constructs. Developed automated unit-testing modules using pytest module and mock objects in Python to provide a first level check for any code breakage in pre-commit runs during the addition of new code to ensure backward compatibility.
- **Birla Institute of Technology and Science** Hyderabad, India
Teaching Assistant for Database Systems Aug 2016 - Dec 2016
 - Assisted the professor for 2-hour long lab sessions thrice a week and helped the students with their course related queries.
 - Monitored practical exams and conducted course project vivas for over 120 students.
- **Institut für Maschinelle Sprachverarbeitung, University of Stuttgart** Stuttgart, Germany
Research Intern, DAAD WISE 2016 Scholar May 2016 - Jul 2016
 - Worked under Prof. Dr. Andreas Maletti to understand the usage of tree transducers for translation models in order to add the English - Hindi translation pair as part of an existing statistical machine translation system called Moses.
 - Employed text-reordering to account for structural differences in English(SVO) and Hindi(SOV) language and pre-processed Hindi text to remove stopwords, honorific and replicative words.
 - Improved BLEU score from an initial 5.8 to 8.2 for Workshop on Statistical Machine Translation (WMT) 14's testset trained on HindEnCorp dataset.
- **Flipkart Private Limited** Bengaluru, India
Summer Intern May 2015 - Jul 2015
 - **Resume Parser:** Identified key resume parsing strategies employed by popular companies like Sovren, Rchilli and worked on retrieving important details like name, contact, email, experience duration from a resume in doc, pdf or html file.
 - **Quick Employee Search:** Google chrome extension added to retrieve short information about employees in Flipkart such as their role, desk location, manager name and business unit based on employee name/ id. Code was written in Java and MySQL was used for database querying.

MAJOR PROJECTS

- **Effort aware model for bug prediction in Software** Hyderabad, India
Supervised by Prof. NL Bhanu Murthy, Department of CS, BITS-Pilani Aug 2016 - Nov 2016
 - Worked on effort-aware defect prediction models using static code attributes namely Halstead and McCabe complexity metrics, three learners- OneR, J48 and Naive Bayes in combination with three data mining algorithms- Naive Bayes, Random Forest and Best First Tree (using Weka) to predict error prone modules in a software.
 - Achieved an accuracy of 83% with RandomForest Algorithm and cyclomatic complexity as effort.
- **Optimisation of spatial queries in PostgreSQL** Hyderabad, India
Supervised by Prof. R. Gururaj, Department of CS, BITS-Pilani Aug 2015 - Nov 2015
 - Studied various implementations of text based indexing methods using Quadtrees, B trees and quad-trees in PostGIS.
 - Experimented with various spatial queries using different indexing techniques on MassGIS spatial database named TOWNS.POLY and created k-dimensional tree based support functions to add more functionality to the kd.point_ops operator class of SP GiST indexing.
- **UCSC+Stanford: The Aspiring Researcher Challenge** Hyderabad, India
Supervised by Prof. Rajan Vaish and Prof. James Davis, University of California, Santa Cruz Apr 2015 - Jun 2015
 - Optimized a Human Computer Interaction system for a computer vision task of localizing cars on a data set in terms of time and accuracy.
 - Employed Support Vector Machines trained on Histograms of Ordered Gradients and used the algorithm's confidence score for ordering the data set before asking human resources to validate the car detection results provided by the machine which resulted in a decrease in human time cost by 62.9% compared to random ordering.
 - Co-authored the paper - *On Optimizing Human-Machine Task Assignments* which was presented in AAAI HCOMP 2015.

MINOR PROJECTS

- **Compiler Design and Construction:** Implemented lexer, parser and scope checker for a custom language and added basic if-else, while and for programming constructs.
- **Document Search System:** Implemented a search system in Python using boolean retrieval and vector space models in combination with tf-idf weighting. Features a graphical user interface for seamless search which outputs N most relevant documents based on user query.
- **Recommendation System:** Implemented a recommender system in R using User-based and Item-based Collaborative Filtering with Jaccard coefficient and cosine similarity on user-movie review data set.
- **Digit Recognition System:** Implemented the Naive Bayes classification model to effectively classify 0-9 digits.

SKILLS

- **Languages:** Python, C, C++, R, Java, Javascript, MySQL
- **Technologies/Libraries:** Docker, MongoDB, Django, Git, Scikit-Learn, TensorFlow
- **Select coursework:** Data Structures, Databases, Linear Algebra, Object Oriented Programming, Probability & Statistics, Operating Systems, Machine Learning, Information Retrieval, Calculus, Computational Geometry, Operations Research

VOLUNTEER WORK

- **Nirmaan Organization (a Non profit Organization):**
 - Taught maths and science to under-privileged students in 2-5th grade in 4 villages under the *School Adoption Program* of Nirmaan BITS Hyderabad Chapter.
 - Helped in empowering women by marketing and supporting their candle and food supplying businesses.

HONORS & ACHIEVEMENTS

- Recognized and monetarily rewarded for outstanding work at **Nutanix** in an organization level meet.
- Awarded the **Merit Scholarship** which waived 80% tuition fees in 7 semesters and 40% in 1 semester for consistently being in the top 1% students at BITS Pilani, Hyderabad.
- Awarded the prestigious **DAAD WISE 2016** scholarship for fully-funded research internship in Germany.
- Core committee member of the **Department of Arts and Decorations** and **Shades club** at BITS Pilani, Hyderabad.
- Member of the **Basketball team** at BITS Pilani, Hyderabad for 2 years (2014, 2015).