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AYUSH SHUKLA

http://ayushshukla.me
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EDUCATION

Degree/Course	Institute/School	CGPA/Percentage	Year
Integrated MS in Mathematics And Computing	IIT Kharagpur	8.55/10	2011-present
Board of Secondary Education M.P.(Class XII)	Gyandeep Higher Secondary	81.6%	2009-2010
All India Secondary School Examination(Class X)	Kendriya Vidyalaya	90% (PCM-97.5%)	2007-2008

SCHOLASTIC ACHIEVEMENTS

- Offered a full time position as Software developer at ezDI Ahmedabad based on the work as technical intern [2015]
- Ranked 5 in the department of Mathematics, Indian Institute of Technology, Kharagpur [2015]
- Recipient of INSPIRE, a merit based scholarship awarded on the basis of academic performance [2012]

WORK EXPERIENCE

Software Developer   **ezDI Health Informatics, Ahmedabad**   **Summer 2015**

Web Application : a **search engine** for International Classification of Diseases **ICD-9** and **ICD-10**
- Developed a high performance search engine in Java and reduced the turnaround time to less than **8ms** for any medical title
- Implemented a see-mapping tool that enabled deep search and enhanced the performance for see and see-also links
- Proposed back-end hierarchical XML database model for over 2 lakhs medical terms that reduced the server space
- Technology stack – Spring-Boot, Spring-MVC, Apache lucene, GZip, JSoup; Regex for pre-processing unstructured data

Research Internship   **Karlsruhe Institute of Technology, Germany**   **Summer 2014**

Client-side **Java plugin** for Scientists to access sensible data from grid database
- Implemented a Java plugin for Unity software service providing authorization functionality on proxy certificates (PC)
- Provided digital attributes to client's PC that is used to access sensible resources on **big data** grids
- Explored Cryptographic aspects of the client-server architecture that uses Public Key Infrastructure (PKI) for authorization

Technical Internship   **OdigMa, Bangalore**   **Summer 2013**

Development of tool that analyses Twitter trending Algorithm
- Extracted data from Twitter API 1.1, stored it in a relational database with schema and analysed data on different features
- Created an web interface where an end-user can access this tool and compare the graphs between trends and parameters
- Technologies used - PHP, JavaScript, MySQL; Libraries - jQuery and highcharts.js

PROJECTS

Master's Thesis Project   **July'15-current**

- **Pattern recognition** : Design an algorithm to cluster and analyze time-series curves that are robust to outliers and anomalies
- Explored different clustering algorithms – K-Means, DBSCAN to get the most accurate result for hierarchical clustering
- Evaluated the model on Canadian weather dataset using python libraries : scikit-learn, pandas, seaborn, numpy, scipy

Natural Language Processing   **July'15-current**

Classifier to segregates tweets into situational, political, communal and charity classes during disaster
- Extracted the best features for model and used backward elimination feature selection method for feature importance
- Incorporated the most accurate classifier among Gradient boosting, SVM, KNN and Random forest for unbalanced dataset
- Achieved 85% in-domain and 81% cross domain accuracy for historic disaster events
- Paper submitted to **ACM Conference** on **Human Factors in Computing Systems** (CHI) 2016, San Jose, United States

Application Development

- Developed a C# app **SOS** on Windows platform which sends geo-tagged location to close contacts in emergency [2014] (Hackathon organised by Microsoft, IDC)
- Implemented a Java GUI application for the project Newspaper Agency Automation Software NAAS [2014] (Software Engineering lab)
- Developed an android app ScienceProject for Akash tablet, to explore different science projects (sponsored by MHRD) [2013] (Advised by Prof. Anupam Basu, Department of Computer Sceince)

RELEVANT COURSEWORK

Natural language processing	Machine Learning	Probability and Statistics	Statistical Inference
Software Engineering	Operating Systems	Object oriented system design	Computer Networks

LANGUAGES AND TECHNOLOGIES

- C, C++, Java, Python, MySQL, Javascript, HTML, CSS, LaTex; Python Modules : scikit-learn, NLTK, pandas, seaborn
- Eclipse, iPython Notebook, Pycharm, MATLAB; Linux, Android SDK