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# SUMMARY

I am a computer science undergraduate student with 1+ year of corporate work experience as Machine Learning Research and Development Engineer, seeking a position of Software Development Engineer.

# TECHNICAL SKILLS

C, Java, Python, Machine learning, Natural language Processing, MongoDB

# EDUCATION

**Bachelor’s in Computer Science and Engineering** (Sep 2011 – Jun 2015)

P.E.S. Institute of Technology South Campus, Bangalore, India **GPA: 4 (83%)**

# WORK EXPERIENCE

**HITACHI Research and Development Center**, Bangalore, India (June 2015- Current)

Job Title: Junior Research & Development Engineer (Machine learning & NLP)

Technologies Used: Python, Java, MongoDB

1. **Temporal Reasoning in clinical Text:** Researched and developed modules to extract temporal events from clinical text using machine learning methods.
2. Our team designed a hybrid method involving Conditional Random Field (CRF) and Rule based methods as part of which we extended Stanford SUTIME library. Also the above extended module was integrated into Apache Ctakes natural language processing system.
3. A research paper was submitted and accepted on same in NAACL HLT 2016 conference which will be happening on June 16 2016 at San Diego.

**HITACHI Research and Development Center**, Bangalore, India (July 2015- Nov 2015)

Job Title: Junior Research & Development Engineer (Machine learning & NLP)

Technologies Used: Python, Java, MongoDB

1. **Numerical Attribute Extraction**- Researched and developed module to extract relationships between numerical attributes and values from clinical text using Structured Support Vector Machine (S\_SVM) and Conditional Random field hybrid.
2. As an extension I also developed a Novel Rule Based approach for the same. Finally an evaluation was done with CRF-SVM, CRF-S\_SVM, CRF-Rule based methods with all of them being integrated into Apache Ctakes natural language processing system.
3. Achieved an average accuracy figure of 96% and an internal research Paper on the same was published.
4. A patent on the same will be filed during June 2016.

**HITACHI Research and Development Center**, Bangalore, India (Jan 2015- June 2015)

Job Title: Machine learning Intern Research Engineer Technologies Used: Python, Java, MongoDB

1. **Expanding Acronyms in clinical Text**: Researched and Developed modules to do word sense disambiguation of acronyms in clinical text documents using Conditional Random field(CRF) and evaluated the same against Random Forest and Naïve Bayes classifier methods.(Python and MySQL)
2. Improved the overall accuracy of the CRF classifier module to 84% and integrated the same into Apache Ctakes natural language processing system.
3. An internal research Paper on the same was published.

**Teri Tree Technologies,** Bangalore, India

Job Title: Software developer Intern Technologies Used: Python, MongoDB

1. Developed a recommendation engine for article recommendation using python.
2. Used relative word ranking for recommendation score calculation.

# ACADEMIC PROJECTS

* **AstroMLsKit** (Jan 2015 – June 2015): Developed an interactive GUI based Machine Learning toolkit with 25 commonly used and 4 new Machine learning Algorithms for helping naive user community to get into Machine Learning research.
  + Source: <https://github.com/mlskit>
  + Demo: <https://www.youtube.com/watch?v=ipvZgPnAWj0>.
  + Paper:<https://www.researchgate.net/publication/275669758_ASTROMLSKIT_A_New_Statistical_Machine_Learning_Toolkit_A_Platform_for_Data_Analytics_in_Astronomy>
* **Msh** (Jan 2014): Developed a miniature Unix Shell that implemented 20 commonly used Unix commands using Unix kernel API. <https://github.com/vishnumani2009/UnixShell>
* **Newton’s Cradle and Blobby Object Simulation** (April 2014): Developed a computer graphics simulation of Newton’s Cradle and Growing MetaBalls using OpenGL/C++. <https://github.com/vishnumani2009/Computer_Graphics_project>
* **Numzle and Snake-Clone** (Jan 2013): Developed game clones of slide puzzles of numbers and Snake using python-pygame framework. <https://github.com/vishnumani2009/NumZle> and <https://github.com/vishnumani2009/snakegrid>.

# Other Projects

**Kaggle – Home Depot Search Relevance Prediction**- Team Code Monkeys (Jan 2016- Current)

Technologies Used: Python (scikit-learn/Pandas), MongoDB

1. Designed and developed a module to predict search relevance score using machine learning.
2. Our team has currently employed ensemble method involving linear regression, Support vector regression, Random forest regression and Gradient boosted regression for score calculation.
3. Currently our team ranks 1055th position out of 2000 participants.

# Certifications and Additional Course Works

* M101JS- MongoDB for Node JS developers - MongoDB Inc. <http://education.mongodb.com/downloads/certificates/7b71feec6c8846cd851df5e192cf7d9c/Certificate.pdf>
* Using Python to Access web Data – Coursera – University of Michigan
* Using Databases with python – Coursera – University of Michigan
* Machine Learning – Coursera – Stanford University
* How to Write and Publish a Scientific Paper – Coursera - École Polytechnique