Gudipati Krishna Chaitanya
Computer Science & Engineering
Indian Institute of Technology Bombay

140050038
B.Tech.
Male
DOB: 12/6/1997

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2018	7.97
Intermediate/+2	Board of Intermediate Education, Andhra Pradesh	Sri Chaitanya Narayana junior college	2014	97.90
Matriculation	SSC	Sri Chaitanya techno school	2012	9.70

ACADEMIC ACHIEVEMENTS

- Secured **All India Rank 37** in **JEE Advanced, 2014** among 128k candidates
- Scored **100 percentile** in **JEE Main, 2014** among 1.4 million candidates
- Secured **State Rank 30** in **AP-EAMCET, 2014** among 395k candidates
- Awarded **AP** grade(given to top 1%) for exceptional performance in **Biology** course at IIT Bombay
- Pursuing **Honors** in Computer Science and Engineering

INTERNSHIPS & RESEARCH EXPERIENCE

Scoring Grammaticality of NLG Output(NLG) Summer 2017
Guide: Abhijit Mishra *IBM IRL, Bengaluru*

- Developed a scoring model to score a sentence according to its grammatical incorrectness
- Also developed an **automated scoring mechanism** to score a sentence based on the edits between the sentence and its correct version.
- Explored SMT, Regression model (SVR,Linear Regression,MLP,LSTM) based approaches for scoring
- Obtained **Pearson correlation** of **0.66** and can rank a set of NLG system output sentences according to their grammaticality. Submitted a **Research Paper** based on the Regression model approach.

Distracted driver detection Summer 2016
Guide: Sasank *Fractal Analytics(Qure.ai), Mumbai*

- Developed an image classification model to classify different images of drivers driving a car into different classes like normal driving, talking on phone, talking to co-passenger etc.
- Explored several methods(using Torch) on top of baseline **Residual Network** models like ensembling, cross validation and human pose estimation.
- Our model is able to classify images with a classification accuracy of **92%**

Grammar Error Correction (BTP) Ongoing
Guide:Prof.Pushpak Bhattacharyya *IIT Bombay*

- Working on a deep learning based Grammar Error Correction system which can both syntactically and semantically correct a grammatically incorrect sentence
- Exploring **NMT** models by viewing grammar correction as a translation from grammatically incorrect to correct sentence

Document Layout Analysis (R&D) Ongoing
Guide:Prof.Ganesh Ramakrishnan *IIT Bombay*

- Working on a model which can segment out the regions of interest (paragraphs, titles, captions, images, etc.) in a document image
- Exploring neural network based approaches like CNN's, NTM's to achieve the task

COURSE PROJECTS

GCC-like compiler Spring 2017
Guide: Prof Uday Khedkar *IIT Bombay*

- Developed a compiler for a subset of **C** language using flexc++ and bisonc++
- Involves tokenizing input code stream, parsing, syntactic and semantic checking and optimized assembly code generation using data flow analysis along with efficient register allocation

Shape Comparison and Retrieval Spring 2017
Guide: Prof.Siddhartha Chaudhari *IIT Bombay*

- Developed a model to find a shape in a large database that is most similar to a given query.
- Implemented a deformation invariant representation of surfaces, the **GPS embedding**, using the eigenvalues and eigenfunctions of the **Laplace-Beltrami** differential operator.
- Applied k-means clustering on the **GPS** coordinates to get a **pose invariant** segmentation of a shape

Job Search Portal Autumn 2016
Guide: Prof S. Sudarshan *IIT Bombay*

- Created an application using **Java** which facilitates the applicants to search and apply for jobs and companies to float jobs and hire employees.
- Applicant can search jobs by applying various filters based on their preferences and also using keywords

Restaurant Recommendation System(ML) Spring 2016
Guide: Prof.Ganesh Ramakrishnan *IIT Bombay*

- Developed a recommendation system that helps the users to choose a restaurant based on his preferences and reviews on the restaurant.
- Implemented the **Logistic Regression** model along with feature optimization techniques like **PCA** and achieved an accuracy of **66%**

Missile Evasion System Spring 2016
Guide: Prof.Supratik Chakraborthy *IIT Bombay*

- Designed a state machine based missile evasion system(using VHDL) that sits in an aircraft and controls it in order to evade any incoming missile.

Password cracking using distributed computing Spring 2016
Guide: Prof. Kameshwari Chebrolu *IIT Bombay*

- Designed a server using **socket programming** in **C++** which takes up the job of cracking a password given its hash value and distributes the work among multiple workers

Branch Change Portal and Seat Allocation Autumn 2015
Guide: Prof.Sharat Chandran *IIT Bombay*

- Implemented **Gale-Shapley** stable matching algorithm in **Python** to solve seat allocation problem
- Created a **Django** web interface for candidates to fill preferences and get predicted branch allotment

OpenGL Game Map Loader Autumn 2016

- Involves rendering a mesh, implementing keyboard and mouse controls to move through the scene, Phong shader and texture mapping using **OpenGL** library

Mesh Simplification Spring 2017

- Involves simplifying a complex **mesh** using **quadric error** metrics

Rube Goldberg Machine Autumn 2015

- Simulated a Rube Goldberg Machine with interactive capability as a game using **Box2D**, a physics simulation engine in **C++**

Chain Reaction Autumn 2014

- Implemented Chain Reaction game using **SimpleCpp** graphics library in **C++**

TECHNICAL SKILLS

- **Programming Languages:** C/C++, Python, Java, SQL, VHDL
- **Web Development:** HTML, CSS, JavaScript, Django
- **Miscellaneous:** R, Bash, Lua, LaTeX , Matlab, Android

EXTRA CURRICULARS

- Cleared **Kishore Vaigyanik Protsahan Yojana (KVPY) 2012** in top **300** among 100k students and was awarded with the scholarship
- Awarded Certificate of merit for being placed in **National Top 1%** out of 37423 candidates enrolled in National Standard Examination in **physics** in 2013
- Active participation in NSS IIT Bombay for promoting greenery in the campus.

INTERESTS AND RELEVANT COURSES

- Machine Learning, Intelligent and Learning Agents, Artificial Intelligence
- Computer Graphics, Digital Geometry Processing