

P Karthic

Final Year Undergrad, IIT Kanpur

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Education

Year	Qualification	Institute	CGPA / %
2020	B.Tech, Biological Sciences and Bioengineering	Indian Institute of Technology, Kanpur	7.0/10.0
2016	Class XII: CBSE	Maharishi Vidya Mandir, Chennai	92.2%
2014	Class X: CBSE	Maharishi Vidya Mandir, Chennai	9.6/10

Experience

Xilinx India

(May '19 - July '19)

ML Engineer (Intern) | Runtime prediction of integrated circuit (IC) designs run on LSF

- Implemented prediction system to **estimate runtime** of IC designs - time taken for conversion from logic to design phase
- Scraped, cleaned, and transformed** numerous IC design metrics to feed in as **features**, used Pandas, Numpy libraries for the same
- Created custom **grid search**, **split train-test** algorithms to **reduce misrepresentation of real-world data** amongst train and test sets
- Plotted **scatter plots** and **histograms** using **Matplotlib** library, to visualize data and identify patterns to **improve feature selection**
- Achieved an **accuracy of 89.75%**, best among multiple prediction systems modelled using Scikit-learn's **random forest** regressor

Tagalys (East Village Technologies)

(December '18)

Software Developer (Intern) | Web tools to interact with Shopify's online stores

- Built a **web plugin** for Shopify stores, that syncs and updates **thousands of its products** with the company's platform
- Authorized with **Shopify API** to allow company's website to perform CRUD operations on stores' product pages
- Implemented a **thread-lock system** for regularly synchronizing products on Shopify stores, without process overlap
- Developed a **User-action-tracker** to record users when products are viewed, added to cart, and bought, for user/product analytics

Projects

Computational Tools for Cognitive Development

IIT Kanpur

Undergraduate Project, Prof. Nitin Gupta

(December '17 - October '18)

- Built mobile games on **Unity3D** for children with **Autism Spectrum Disorder**, to enhance their **working memory**
- Designed structure of games to be engaging by **randomizing** visual, auditory **reinforcements** according to game stages
- Programmed levels to be **adaptive to player cognitive ability**, by dynamically analyzing inputs and updating the game accordingly
- Implemented **OOP** on **C#** and **relational databases using SQLite**, for management of game objects and storing static data
- Tested** games on children from special school in Kanpur, analyzed various metrics (such as engagement time) to improve game design

Team Website, AUV

IIT Kanpur

Web Developer

(October '17 - December '17)

- Built a static website using **Jekyll**, a static-site generator that uses **Liquid** templating language, to reduce repetitions in code
- Implemented **Bootstrap** framework for a **mobile-first responsive** web design and **cross-browser compatibility**
- Used **YAML format** to store static data and **markdown** files for storing blog entries

Technical Skills

- Programming:** C/C++, Python, Octave, MATLAB
- Utilities:** Git, AUTOCAD, Linux, Windows, LATEX, Jupyter Notebook
- Web Dev:** Ruby on Rails, ExpressJS, NodeJS, Jekyll, Bootstrap, MySQL
- Game Dev:** Unity3D, C#, SQLite

Relevant Courses

* ongoing

Machine Learning	Statistical Simulation and Data Analysis*	Computational Methods in Engineering*
Bioinformatics and Computational Biology	Probability and Statistics	Fundamentals of Computing

Scholastic Achievements

- Top 6% among 2,00,000 candidates appeared in JEE Advanced, 2016
- Top 2% among 15,00,000 candidates appeared in JEE Mains, 2016

Interests and Extracurricular Activities

Interests/Hobbies

- Solving data science problems on **Kaggle**
- Automating** common tasks such as **tracking product price dips**, **sending emails in bulk** to project members, etc.

Sports - Basketball (Summer 2017)

- Attended intensive 2-month Basketball Summer Camp at IIT Kanpur, requiring **6-7 hrs** of practice each day
- Competed as a team in multiple matches, with players representing Kanpur district