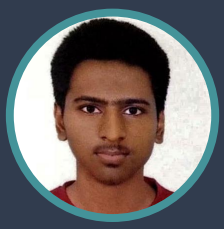
# Pratik Garai

Undergraduate Student, VIT Chennai

Self-motivated student who has an ingrained passion for Computers and programming, and is always eager to add to his knowledge and apply what he has learnt. Currently pursuing a B.Tech degree in Computer Science.



pratikgarai0208@gmail.com | Kolkata, India | linkedin.com/in/pratik-garai-bab1a4191 | github.com/PratikGarai

## EDUCATION

### Bachelor Of Technology
Vellore Institute Of Technology, Chennai

*05/2019 - 07/2022* *8.90 CGPA*

*Courses*

- Computer Science and Engineering
- Artificial Intelligence and Machine Learning

## WORK EXPERIENCE

### Software Engineer Intern
Microsoft

*05/2022 - 07/2022* *Bangalore, India*

*Intern in SynapseML Team*

*Achievements/Tasks*

- Profiling performance of Pandas vs Spark PandasAPI over various standard Data Science workloads in SynapseML environment

### Software Developer Engineer Intern
Pharmiq

*08/2021 - 05/2022* *New Jersey, USA*

*Backend developer, AI Developer*

*Achievements/Tasks*

- Enhancing the data aggregation pipeline by adding a system to automatically generate update notifications. Implemented search feature across 10+ tables of the database with 1million+ entities with a response time of < 100 ms. Implemented a tag system to generate tags from entity description using a combination of NLP and Graph database

### AI Developer Intern
Samsung Research Institute

*11/2021 - 07/2022* *Bangalore, India*

*Achievements/Tasks*

- Building a full stack image and video annotation web application using React, Flask and Tensorflow
- Developing a language model for English Marathi conversation using RASA, Spacy, Fasttext and JarvisAI

### AI Developer Intern
ZOHO

*08/2021 - 12/2021* *Chennai, India*

*Integration of Federated Learning into OCR pipeline*

*Achievements/Tasks*

- Implemented OCR using deep learning with an accuracy> 95%. Deployed the OCR on a federated architecture with < 5% loss after applying differential privacy

### Freelancing
Self Employed

*08/2020 - 07/2022*

*Achievements/Tasks*

- ROS programmer and developer : SLAM for Autonomous Ground Vehicle
- Text classification for customer sentiment analysis using Deep Learning techniques to an accuracy > 90%

## SKILLS

Python3 | Javascript | Django | Tensorflow 2 | Pytorch | FastAPI | RASA | Spacy | Flask | Scikit-Learn | OpenCV | NodeJS | React | Java | JQuery | Postgres | MongoDB | SQL | Git | C++ | Golang | Pyspark

## PROJECTS

### Prognosist
- A medical web application for generating prognosis of diseases based on symptoms faced by the user. The database logs the symptoms of unique users to generate analysis of trends of symptoms which can be viewed by analysts to predict upcoming outbreaks. Developed using Django and Scikit Learn.

### 3 Stage OCR
- An attempt to replicate ASTER, but using custom models in 3 stages. The model uses VGG16 for feature extraction, a bi-LSTM for sequential analysis and a Dense Neural Network for decision-making. The project also includes an easy-to-use dataset generator for the pipeline. Obtained an accuracy of > 95% on 10000+ images of texts of various fonts, orientations and colours.

### Genetic Flappy Bird
- A classic Flappy Bird game and an AI model to learn playing the game, developed using PyGame and NEAT. The model uses Genetic Algo- rithm to get almost perfect at playing the game.

### Events Auto Mailer
- Automated mail service to send email reminders to users based on personally subscribed events. The mail contains ETA and deadline in a sorted order to aid the decision of order of work completion. Built using MERN stack and SendGrid as mailing service.

### Sales Manager
- A web application for sales data management and analytics devel- oped using Django, Bootstrap, Crispy forms, JQuery and Dropzonejs. The application allows uploads of products and transaction receipts as csv and generates and visualizations on them, which can be viewed on web and/or downloaded as a pdf.

## ORGANIZATIONS

Google Developer Student Club (09/2020 - 07/2022)
*Open Source Committee Member*

Dreadnought Robotics (01/2020 - 07/2022)
*Head of Programming And Analysis Department*

Microsoft Innovations Club (02/2021 - 07/2022)
*Technical Head and Internal Projects Manager*

## PUBLICATIONS

(Preprint) FedUKD: Federated Unet Model with Knowledge Distil- lation for Land Use Classification from Satellite and Street Views
*https://papers.ssrn.com/sol3/papers.cfm?abstract_id= 4062814*