

# Piyush Tiwary

## Education

- 2017-2021 **Indian Institute of Technology Patna**, *Bachelor of Technology in Electrical Engineering*, CGPA: (Expected) *8.34/10.0* (After 4 Semesters).
- 2016-2017 **Intermediate/+2, MSBE, LVH, Nashik**, *79.84%*.
- 2014-2015 **Matriculation, CBSE, KVCRLY, Solapur**, CGPA: *10.0/10.0*.

## Experience

- May 2019 - **Crio Summer Of Doing - 2019**, Crio.DO.
- June 2019
  - Developed Back-end of **Q-Eats** (a food Ordering App) using **Spring framework** in Java.
  - Learnt and implemented many Industry related tools/technologies like - REST APIs, MongoDB, Caching, Multi-threading, Docker and RabbitMQ.
  - Made an *Order Page* for QEats in the Capstone Challenge enabling user to see his/her orders and provided various functionalities.
- May 2019 - **Research & Development Intern**, VIDEOKEN.
- July 2019
  - Worked as a part of R&D Team and explored different methods of Speaker Diarization.
  - Studied & Implemented **UIS-RNN** in *Tensorflow*.
  - Made a primitive model able to **diarize 2 speakers** with maximum delay of ~30 seconds.
  - This model will be deployed to diarize "*Interview*" type of audios.
- Summer 2018 **Hybrid Classifier for Smart Agriculture Cyber Physical System**, IIT PATNA, Guide: Prof Sudhir Kumar, IIT Patna & Prof Sajal .K. Das, Missouri University.
- Worked on Berkeleys Intel Lab Dataset to Localize the positions of wireless sensor nodes.
  - Implemented a Hybrid Classifier to classify and predict location of each sensor using various combinations of Classifiers like Decision Tree, Random Forest, k-Nearest Neighbor and SVM.
  - Achieved an overall **95% accuracy** and **1.16m localization error**.

## Publications

- ICDCN'19 Ankur Pandey, **Piyush Tiwary**, Sudhir Kumar, and Sajal K Das. A hybrid classifier approach to multivariate sensor data for climate smart agriculture cyber-physical systems. In Proceedings of the 20th International Conference on Distributed Computing and Networking, ICDCN 19. ACM, 2019. "[click here to view](#)"

## Achievements

- Codechef Secured a Global Rank of **60** in Codechef July Long Challenge'19.
- Comp Coding Specialist(Blue) on Codeforces and 4-star(Purple) on Codechef.
- UVa Ranked in top 5000 on UVa Online Judge.
- JEE Adv. Secured **All India Rank 4880** in JEE Advanced 2017 among **150,000** candidates.

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## Projects

- July 2019 - **History Scrapper**, Google Chrome Extension.  
Present
  - Building a Chrome extension which provides user with their Browsing history and summary.
  - The aim is to deploy Deep Learning techniques to predict most likely site the user is going to visit.
  - Built the backend of the extension using **Flask** framework in python.
- May 2019 - **Notes Seperator**, Developer Student's Club.
- June 2019
  - Developing an app for students of IIT Patna which can automatically detect whether a given image is of someone's notes or not and will suggest you to delete them.
  - Implemented different CNN architectures such as *LeNet*, *AlexNet*, *VGGNet*, *GoogleNet* and *ResNet* for classification.
- Jan 2019 - **Crime Predictor**, Data Science Course Project CS244.
- April 2019
  - Project to Forecast crimes in the city of California using OSN dataset.
  - Using various ML algorithms (Decision Tree, Random Forest, SVM, Naive Bayes, etc) to see which one best fits the data most accurately.
- Jan 2018 **Celvika**, ChatBot.
  - Used the concept of **LSTMs** and **RNNs** to make a Real time primitive chatbot capable of doing conversation through GUI (like command line or shell).
  - The bot is modeled using Tensorflow's seq2seq module with attention. The architecture uses 3 layers which can be configured to be either LSTM or GRU based.

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## Technical Skills

- Language C, C++, Python, Haskell, Java, Bash
- Tools and Libraries Docker, Flask, Tensorflow, PyTorch  $\text{\LaTeX}$ , Matlab, SpringBoot

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## Courses

- Computer Science Foundations of Machine Learning, Advanced Machine Learning, Introduction to Data Science, Data Structures & Algorithms, Computational Complexity, Human Computer Interaction
- Mathematics Linear Algebra, Complex Analysis, Partial Differential Equations, Probability Theory and Random Processes

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## Positions Of Responsibility

- March 2019 - **Project Mentor**, DEVELOPER STUDENTS CLUB IIT PATNA.  
Present
  - Mentored 2 Deep Learning Based projects - Notes Seperator & Interview Assistant.
  - Conducted classes and workshops for students to make them familiar with Deep Learning and tools like tensorflow and pytorch.
- Aug 2018 - **Badminton Coordinator**, IIT PATNA.  
Present
  - Lead the Badminton team of IIT Patna in various Sports tournament. Represented IIT Patna in **51st** (at IIT Madras) and **52nd** (at IIT Guwahati) **Inter IIT Sports Meet** along with 4 other teammates.