

Taresh Batra

Final Year Student @ BITS Pilani

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EXPERIENCE

COULOMB AI | DATA SCIENCE INTERN

November 2021 – January 2022 | Bangalore, India

- Coulomb AI is a Y-Combinator backed start-up. It is working towards accelerating automotive electrification by making the EV business profitable faster.
- My job here was related to predicting the SOH (State Of Health) and the RUL (Remaining Useful Life) values for industry-grade electrical batteries. The lifetime of such batteries is tricky to predict based on the readings observed in the first few battery cycles. I helped with the feature engineering aspect with an exhaustive EDA, and also developed a few models that helped towards increasing their then prediction capacity.

UST GLOBAL | MACHINE LEARNING INTERN

May 2021 – July 2021 | Trivandrum, India

- My job here was to build a meeting summarizer. This task fell under the domain of abstractive text summarization (paraphrasing the main contents of the given text, using a vocabulary different from the original document).
- I used a transformer-based model called BART, developed by Facebook AI and fine-tuned it on a dataset called SAMSum, which contains a lot of chat conversations and their summaries.

PROJECTS

FLIBGIB | APP DEVELOPMENT AND ENTREPRENEURSHIP

July 2021 - Present

- Flibgib is a self-initiated project. I started this project with a friend, building on an idea we had to make online dating a more wholesome experience for everybody while respecting the sensitivity associated with this intimate matter.
- We found that most leading dating apps were primarily trying to reinforce desperate behaviour by engaging the users' attention with their addictive gestures.
- The MVP is almost complete and is expected to go into beta testing by the second week of June 2022. Click here to view the Website.

SAR-OPTICAL IMAGE TRANSLATION | COMPUTER VISION (CV)

August 2021 - December 2021

- I worked under Dr Nitin Sharma (Associate Professor, BITS Pilani, Goa Campus) with the purpose of improving the state-of-the-art model for SAR-Optical Image Translation. His research on this topic is funded by the Indian Space Research Organisation (ISRO).
- We built a Supervised CycleGAN with a U-Net architecture and used techniques like equalized learning rate and layer normalization introduced in the ProGAN paper to smoothen the training process in an attempt to build on the state-of-the-art.

CUFFLESS BP PREDICTION | TIME-SERIES FORECASTING

January 2022 - Present

- I am working on an investigative study in collaboration with researchers at HKUST Hong Kong under the guidance of Professor Tirtharaj Dash. This project aims to improve the precision of non-invasive blood pressure monitoring methods (PPG and ECG) to resemble the gold standard of invasive procedures like ABP. Doing so will yield easy access to accurate cardiac vitals for quick medical diagnosis.

SKILLS

TECHNOLOGIES

- Machine Learning • BI
- Data Mining • NLP • CV
- Data Science • UI/UX Design
- Full-Stack App Development

PROGRAMMING

- Python • C • C++ • Dart
- MATLAB • JS • Java

LIBRARIES/Frameworks

- PyTorch • Tensorflow • Keras
- Pandas • Numpy • RL-Glue

SOFTWARES/TOOLS

- Git • Firebase • Tableau
- MATLAB • Flutter • Adobe Xd

EDUCATION

BITS PILANI

B.E. ELECTRICAL AND ELECTRONICS
ENGINEERING (EEE) (MAJOR) DATA
SCIENCE (MINOR)

Aug 2019 - Present | Goa, India

CGPA: 8.91 / 10.00

PACE JUNIOR SCIENCE COLLEGE

HIGH SCHOOL DIPLOMA

May 2017 - May 2019 | Mumbai, India

ICSE Exam Score: 85.38/100.00

PAWAR PUBLIC SCHOOL, CHANDIVALI

MIDDLE SCHOOL

Aug 2013 - Mar 2017 | Mumbai, India

HSC Exam Score: 96.33/100.00

COURSEWORK

- Foundations of Data Science
- Deep Learning (also served as a Teaching Asst.)
- Applied Statistical Methods
- Reinforcement Learning
- Machine Learning
- Optimization
- Communication Systems
- Mobile Telecommunication