

# Rounak Vyas

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## Education

June 2016 - **Bachelor of Technology (B.Tech)**, *Information Technology, SRM Institute of Science and Technology*,  
July 2020 Chennai, India.

Undergraduate Thesis: Classification and Localisation of acne lesions using Object Detection Algorithms.

CGPA: 9.28/10.00

## Experience

Aug. 2020 - **Software Engineer(Analyst)**, *Risk Finance and Treasury Team, Barclays*, Pune, India.

- Present
  - Architected and Implemented a custom job scheduler using Quartz that handles data-archival processes across various teams inside the company. The scheduler is integrated and synchronised with other micro-services.
  - Helped set up a caching layer over the main API that deals with storing metadata information to provide dataset management services. It improved the registration time of new trade datasets.
  - Implemented a custom date-formatter for end-users to create custom dates on the fly while using the main metadata API, among other features and bug-fixes.

Jan. 2020 - **Research Intern**, *Harvard Medical School*, Cambridge, Massachusetts.

- July. 2020
  - Worked under Dr Shiladitya Sengupta at Center of Engineered Therapeutics, on Object Detection Algorithms such as Faster-RCNN and RetinaNet for localisation and classification of acne lesions.
  - Worked under Dr Vivian Lee, on an Automatic XY Calibration System for Aether 3D-Bioprinter which calculates XY offsets of multiple extruders using Computer Vision.

Dec. 2018 - **Software Technology Intern**, *Thomson Reuters*, Hyderabad, India.

- Jan. 2019
  - Worked in a team of 3 interns to implement a Proof of Concept to integrate ELK (Elasticsearch, Logstash, Kibana) Stack to an existing chatbot for real-time log aggregation, analysis and querying.
  - Designed and implemented internal tooling to improve indexing time of documents by 85% with the help of parallelism.

## Programming Skills

**Languages:** Java, Python, C/C++    **Frameworks:** Spring, Hibernate, Flask, OpenCV

**Databases:** MySQL, Elasticsearch    **Work Flow:** Git, GitHub, Travis CI

## Projects

- calibCV:** An automatic XY calibration system for Aether 3D-Bioprinter using Computer Vision. A web app to calculate XY offsets of multiple extruders of a 3D Bio-Printer. The project was under the supervision of Dr. Vivian Lee, Harvard Medical School.
- markov-gen:** A Markov Chain Text Generator used to randomly generate (somewhat) realistic sentences, using words from a source text. Words are joined together in sequence, with each new word being selected based on how often it follows the previous word in the source document.
- es-indexer:** A PyPi package to populate json data into elasticsearch efficiently using multi-threading.

## Awards and Extracurriculars

Aug. 2019 Speaker, PyCon New Zealand (Kiwi PyCon X), Scholarship: 500 NZD ( $\approx$  Rs. 23000).

Mar. 2019 3<sup>rd</sup> Place, Ctrl-Alt-Code IoT Hackathon. Team Captain: Team *Park.ai*.

Jun. 2018 Academic Scholarship of Rs. 21500, Department Rank Holder List, 2017-2018.

Aug. 2017 Student Researcher, Artificial Intelligence, Next Tech Lab, Chennai, India.

Jan. 2012 Table Tennis: Top 8 of 100+ teams in School Games Federation of India Nationals.