

Pranjal S Rajput

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Full-stack software engineer with 3+ years of industry experience. Seeking full-time position in Machine Learning/Software Engineering.

Education

- 2018–2020 **Delft University of Technology, Faculty EEMCS, M.Sc., Embedded Systems.**
Research Thesis: Heuristics2Annotate: Efficient annotation of a large-scale in-the-wild marathon dataset for bounding box regression using computer vision algorithms. Supervisor Prof. Dr. Jan van Gemert
Masters Annotation in Entrepreneurship: Learned basics of entrepreneurship, corporate entrepreneurship, etc. Pitched the business idea for a startup of a universal sensor system attachable to any toothbrush, accompanied by a smartphone application.
- 2011–2015 **Maulana Azad National University of Technology, Bhopal, India, B.Tech., Electronics & Communication Engineering.**
Major Project: Developed a car security system consisting of a finger print module, an alcohol detector module and a RFID module. Supervisor Prof. Dr. Jyoti Singhai

Academic Projects

- 2019 **Organized the campaign for recording and archiving a novel video dataset of marathon runners.**
Lead the campaign to record and archive a video dataset of marathon runners captured using 42 hand held smartphone cameras covering a full-marathon track of 42km length.
- 2019 **Conditional Generative Adversarial Networks for Cartoon to Real Life Images.**
Used cGANs for generating real faces from their cartoonized versions.
- 2019 **Developed three Android Apps for Human Localization and Activity Recognition.**
Using signal strength of multiple WiFi access points, the apps are used to localize and recognize the activity of a person on a floor of a building. Methods used are K-nearest neighbor, Bayesian filter and Particle filter.
- 2019 **Stabilized a Quadruple drone using nRF51822 μ C and controlled it wirelessly.**
Stabilized a quadcopter such that it can hover and fly with only limited user control. Also developed an android app to control the quadcopter using an android phone.
- 2019 **Analysis of Software Architecture & Contribution to an Open Source Project FLAIR.**
Analyzed the complete architecture of a Natural Language Processing library FLAIR. Contributed to the project by improving the code quality of FLAIR from grade C to A.
- 2018 **Implemented three Distributed Algorithms in Java.**
Implemented 3 different algorithms namely Birman-Schiper-Stephenson Algorithm, Afek-Gafni's Asynchronous Algorithm & Randomized Byzantine Agreement for the Distributed Systems.

Research Experience

Work Experience

2015-2018 **Senior Software Engineer (Nucleus Software Exports Ltd, India).**

Was responsible for the first successful deployment of the product at the client side.

- **Algorithms Implemented:** Decision Tree, Logistic Regression, K-Means clustering.
- **Technical & Performance Upgradation:** From Struts 1.x and Java 6 to Struts 2 Framework and Java 8. Enhanced and improved the performance of various functionalities of the product like Multiple Linear Regression, Scorecard, Logistic Regression.
- **Security Upgrade:** Enhanced application security by implementing features like X-frame Options, Cryptographic nonce and database layer.
- **Browser Compatibility:** Made application compatible for Chrome, Mozilla Firefox, & IE 11.
- **Database Script:** Creation, Rollback and Cleanup for the entire application.

Internships

2014 **Summer Internship at Indian Institute of Technology, Indore.**

Face Recognition Using PCA: Developed a program that recognized faces from a human face dataset using principal component analysis technique.

Teaching Experience

April 2020 - **Graduate Teaching Assistant: CS4245 Computer Vision.**

July 2020 Guided 2 student projects, graded seminar presentations, evaluated the questions submitted by the students.

April 2020 - **Graduate Teaching Assistant: IN4392 Cloud Computing.**

July 2020 Graded the paper summaries submitted by students.

Feb 2020 - **Graduate Teaching Assistant: CS4240 Deep Learning.**

April 2020 Guided 5 DL projects, helped students during the lab, evaluated the assignments.

Nov 2019 - **Graduate Teaching Assistant: IN4150 Distributed Algorithms.**

Feb 2020 Helped students during the lab, evaluated lab assignments and paper summaries submitted by students.

Summer Schools

July 2020 **Eastern European Machine Learning Summer School, Krakow Poland.**

Focused on latest trends in Deep Learning. Attended guest lectures, theoretical lectures & practical sessions related to Deep learning.

Nov 2019 **ATHENS Network: Advanced Technology Higher Education Network, Czech Technical University in Prague, Grade: A.**

Learned various concepts of Game Theory.

Technical Skills

Programming Skills: Python, Java, C++

Python Libraries & Frameworks: Numpy, Scipy, Matplotlib, pandas, scikit-learn, PyTorch

Deep Learning Frameworks: PyTorch, Tensorboard

Workflows: Linux, ROS, Git, Tortoise SVN

Database: Oracle, MySQL, Sqlite

Web-Related Knowledge: JSP, JQuery, JavaScript, Struts, Spring, HTML, CSS, Servlets

Others: Eclipse, Jenkins, Jasper, SonarQube, JIRA, PyCharm, Android studio, Bash, Docker

Honors and Awards

- 2019 **Travel Grant for student exchange program**, ATHENS Network
- 2018 **Pride Of Performance Award** for best performer of the quarter in the team
- 2017 **L.I.V.E Small Team Award** for best small team in the company in the year 2017
- 2012 **Second Runner-up**, Grid Solver Robot competition in Central India's largest technical event

Extra Curricular Activities

- 2014-2015 **Technical Head of Vision, a technical student club**, *MANIT*, India.
Organized several workshops including white line tracer robots.
- 2012 **Organizer of Workshops**, *MANIT*, India.
Conducted various workshops on Microcontrollers, & MATLAB for freshmen.
- 2013 **Roboelevar**, *MANIT*, India.
Organized a national level Robotics competition "ROBOELEVAR" in TECHNOSEARCH'13, at MANIT.

Languages

- English** Business Fluent
- Hindi** Mother Tongue or Bilingual Proficiency