

## Teams

Project	Roll Number	Name
<b>PID: Title</b> <b>Description</b> <i>Technology</i>		

### Team 1:

<b>P0: Distribution of Basic Amenities like Food, Clothing, Medicine</b> Design a menu-based donation website that perform collection of amenities, sorting and further its distribution during disasters while performing optimized matching. Collected food should be measured on basis of calories and requirements of the evacuation centres on the basis of population. Supply Chief should update the requirements of the centres on the daily basis. Also advertise shortage of amenities after calculating requirements. <i>Genetic Algorithms</i>	2019PCS2007	Anupam Sharma
	2019PCS2015	Harnirvair Singh
	2017UCO1678	Ujjawal Pabreja
	2017UCO2117	Nimish Mangal

### Team 2:

<b>P1: Allocation of Resources (Drones and Humans)</b> Design a website like a rescue personnel to register Volunteers (Professionals, Amateurs) in a disaster struck situation. Perform commissioning of drones or humans as per requirement of the location. Access locations on basis of the calamity affect (Drones to monitor the locations). Deploy drones to provide food or medicine if humans cannot reach or to access if rescue is required. Deploy humans if rescue operation is required. Humans may have skills like Swimmers, Psychiatrist, Doctors, Nurse, Knowledge of first aid, etc. <i>Natural Language Processing</i>	2019PCS2003	Ashutosh Sanyal
	2019PCS2015	Harnirvair Singh
	2017UCO1682	Rishabh Gupta
	2017UCO2117	Nimish Mangal

### Team 3:

<b>P2: Deriving skills set from a person's social media profile through world wide web &amp; inviting them to volunteer</b> Design an application and/or website that can extract the related skills set from a person's social media profile (say Facebook, Instagram, LinkedIn etc.) through his/her postings, pages/posts liked and shared, and other such activities. On the basis of derived skills set, notifications can be sent to the person inviting them to be a part of the interest groups formulated as per their attributes such as skill set, location, time of availability, past experiences, resources they can offer (such as food, shelter, nursing, counselling and so on). Meet – and – greet among the volunteers and victims, acknowledgement of bravery acts to motivate others via award ceremonies. <i>Natural Language Processing</i>	2019PCS2002	Mansi Teharia
	2019PCS2006	Vishal Kumar
	2019PCS2016	Prachi Sharma
	2017UCO1579	Manvi Agrawal

### Team 4:

	2019PCS2011	Richa Sharma
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<b>P3: Suggesting pair of bereaved people, going through complementary losses during a disaster, who can comfort each other.</b> Design an application and/or website that can suggest pairs of people going through complementary losses, for instance a mother who has lost her kid can find some solace in taking care of kids who have lost their families in a calamity. The data can be collected from the listings of lost and found, death records, hospital reports and so on. References: <a href="https://www.ncbi.nlm.nih.gov/books/NBK217843/">https://www.ncbi.nlm.nih.gov/books/NBK217843/</a> <a href="https://www.ncbi.nlm.nih.gov/books/NBK217845/">https://www.ncbi.nlm.nih.gov/books/NBK217845/</a> <i>Genetic Algorithms</i>	2019PCS2016	Prachi Sharma
	2017UCO1669	Raunaq Singh
	2017UCO1678	Ujjawal Pabreja

#### Team 5:

<b>P4: Recommender System for allocating doctors to Health camps</b> Design an application to suggest possible allocation of doctors to different doctors to nearest health camps on shift – basis. The application must maintain list of doctors willing to volunteer during emergencies. Sign – up form should include doctor’s willingness to volunteer while out of station as well. <i>Genetic Algorithms</i>	2019PCS2002	Mansi Teharia
	2019PCS2014	Chahat
	2019PCS2018	Ankit
	2017UCO1635	S Vignesh Kumar Pandian

#### Team 6:

<b>P5: Centralized Management of Health Camps</b> Design an application and/or website for immediate treatment in emergency situations via centrally – managed health camps. It may include: <ul style="list-style-type: none"> <li>• Availability of patient beds,</li> <li>• Types of first aid resources required in accordance with the calamity.</li> <li>• Inter – camp communication.</li> <li>• Display of real time status of resource availability and occupancy.</li> </ul> <i>Genetic Algorithms</i>	2019PCS2003	Ashutosh Sanyal
	2019PCS2013	Rahul Makkar
	2019PCS2018	Ankit
	2017UCO1579	Manvi Agrawal

#### Team 7:

<b>P6: Recommender System for setting up of Health camps</b> Design an application to suggest possible locations in advance, for setting – up of health camps at the time of calamity. Aspects to be considered while setting up the camp: Region of Calamity, Season, Population Density, Type of Calamity (such as Flood, Earthquake, Landslide, Tsunami, Avalanche). <i>Genetic Algorithms</i>	2019PCS2008	Avnish Anand
	2019PCS2020	Charu Bhargava
	2017UCO1530	Tushar Gupta
	2017UCO1669	Raunaq Singh

#### Team 8:

<b>P7: Spam Detection and blocking of fake messages and websites during calamities</b>	2019PCS2008	Avnish Anand
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Design an application to detect fake messages and websites during calamities, engaged in spreading rumors. This prevents exaggeration of the situation and prevents distraught in the public. <i>Neural Networks</i>	2017UCO1561	Sharlin Kumar
	2017UCO1662	Nishant Singh
	2016UCO2531	Yash Bansal

#### Team 9:

<b>P8: Property sign – up for local relief shelters in emergency</b> Design a website where property owners can sign – up for volunteering their properties such as residence, office building, farm house, banquets halls, etc. Sign – up form should include details such as infrastructure size, amenities such as bathrooms, pantry, beddings, etc. <i>Natural Language Processing</i>	2019PCS2004	Dipanshu Kumar
	2017UCO1585	Ashwani Singh
	2017UCO1631	Arjun Singh
	2017UCO1657	Hemant Vashist

#### Team 10:

<b>P9: Depression Detection</b> Generate signs for individual for levels of depression (Can be colour coded: Red, Green, Yellow) on the basis of their location, time, input image. Suggestions can be given as per the diagnosis such as: <ul style="list-style-type: none"> <li>Option to call favourite person (can be automatically suggested on the basis of call history and messages exchanged)</li> <li>Play favourite music or suggest music to enhance mood.</li> <li>Suggest some outdoor activities(<a href="https://www.entrepreneur.com/article/343004">https://www.entrepreneur.com/article/343004</a>).</li> <li>Suggestion to go on a holiday and Assistance in planning.</li> <li>Suggest change in lifestyle such as Yoga, Meditation, Walking, Dancing.</li> </ul> Application of app/ website for students, corporate employees and whosoever is willing to seek help. <i>Genetic Algorithms</i>	2019PCS2001	Sheetal Bhati
	2019PCS2020	Charu Bhargava
	2017UCO1585	Ashwani Singh
	2017UCO1662	Nishant Singh

#### Team 11:

<b>P10: Website for Lost and Found</b> <ul style="list-style-type: none"> <li>Aadhar number can be used as the basis for identification of individuals.</li> <li>In case of victims such as minors, heavily – injured, traumatized, their biometric traits can be used to fetch the records, so as to locate their permanent residence and/or contact their guardians.</li> </ul> <i>Genetic Algorithms</i>	2019PCS2004	Dipanshu Kumar
	2019PCS2017	Aniket Tomar
	2017UCO1620	Vaibhav
	2017UCO1657	Hemant Vashist

#### Team 12:

<b>P11: Website for financial assistance to victims in emergency</b> List of identified victims with their Aadhar number. Following claims can be verified for settlement:	2019PCS2010	Deepak Aryal
	2017UCO1576	Mansi Joshi

<ul style="list-style-type: none"> <li>• Consolation amount to injured.</li> <li>• Condolence amount to the deceased's family.</li> </ul> <i>Genetic Algorithms, Natural Language Processing</i>	2017UCO1620	Vaibhav
	2017UCO1698	Ayan Krishna Paul

#### Team 13:

<b>P12: Psychological Aid for victims in emergency</b> Design an application identify the types of psychologist for counselling, gathering personality traits through social media accounts, mapping of victims to psychologists on the basis of their mental state and the type of loss incurred. <i>Neural Networks</i>	2019PCS2006	Vishal Kumar
	2017UCO1550	Anubhav Dhankhar
	2017UCO1576	Mansi Joshi
	2017UCO1621	Prabhat Kumar

#### Team 14:

<b>P13: Allocation of Volunteers</b> Perform allocation of registered volunteers to perform different activities during disaster struck situation. Advertise on social media for skills requirement depending upon the disaster struck situation. Humans may be required of skills like Carpentry, Social work, etc. <i>Genetic Algorithms</i>	2017UCO1528	Amit Gupta
	2017UCO1630	Silki Sharma
	2017UCO1635	S Vignesh Kumar Pandian
	2017UCO1653	Naman Jain

#### Team 15:

<b>P14: Extraction of Skills</b> Design a system which extracts skills from a text using Natural language processing. <i>Natural Language Processing</i>	2019PCS2017	Aniket Tomar
	2017UCO1542	Gaurav Kumar
	2017UCO1614	Manoj Menpadi
	2017UCO1630	Silki Sharma

#### Team 16:

<b>P15: Skill Ontology</b> Design a Skill ontology, where a set of skills are clubbed into a higher skill using some threshold value after calculating the distance between the words to see their closeness. The system should take a textual content into account and first provide its skills and then determine the higher skills. <i>Neural Networks</i>	2019PCS2010	Deepak Aryal
	2019PCS2013	Rahul Makkar
	2017UCO1653	Naman Jain
	2017UCO1680	Shorya Kumar Pradeep

#### Team 17:

<b>P16: Extraction of Non-Technical skills from Resume</b> Design a system that perform extraction of non-technical skills from resumes using fuzzy theory. Also suggest approximate level of skills using years of experiences, project works involvement, certification, etc. <i>Natural Language Processing, Fuzzy Theory</i>	2017UCO1528	Amit Gupta
	2017UCO1614	Manoj Menpadi
	2017UCO1621	Prabhat Kumar
	2017UCO1660	Ashmeet Singh

#### Team 18:

<b>P17: Job recommender System</b> Design a recommender system that takes Resumes as input and recommend what 3 to 4 job profiles as a suggestion that maybe suitable for the candidate. Take education, experience, project work involvement, hobbies, certificate awarded into account. <i>Genetic Algorithms, Natural Language Processing</i>	2019PCS2009	Yathartha Anirudh Joshi
	2019PCS2014	Chahat
	2017UCO1525	Vaibhav
	2017UCO1660	Ashmeet Singh

#### Team 19:

<b>P18: Teach a Neural Network to Read Handwriting</b> Perform Handwriting recognition using MNIST Handwritten Digit Classification. Image data is generally harder to work with than “flat” relational data. Data is beginner-friendly and is small enough to fit on one computer. System doesn’t need high computational power. <i>Neural Networks</i>	2019PCS2005	Anurag Sharma
	2019PCS2019	Simran Sejwal
	2017UCO1542	Gaurav Kumar
	2017UCO1682	Rishabh Gupta

#### Team 20:

<b>P19: Image Classification with Convolutional Neural Networks</b> Convolutional neural networks (CNN) is popularly used in image classification. The main task of image classification is acceptance of the input image and the definition of its class. This is a skill that people learn from their birth and are able to easily determine that the image in the picture is an elephant. But the computer sees the pictures quite differently: Instead of the image, the computer sees an array of pixels. For example, if image size is 300 x 300. In this case, the size of the array will be 300x300x3. Where 300 is width, next 300 is height and 3 is RGB channel values. The computer is assigned a value from 0 to 255 to each of these numbers. This value describes the intensity of the pixel at each point. To solve this problem the computer looks for the characteristics of the base level. In human understanding such characteristics are for example the trunk or large ears. For the computer, these characteristics are boundaries or curvatures. And then through the groups of convolutional layers the computer constructs more abstract concepts. To create such model, it is necessary to go through the following phases: model construction, training, testing, and its evaluation. <i>CNN, Python, Keras, Google’s TensorFlow, Pycharm, Matplotlib.</i>	2019PCS2007	Anupam Sharma
	2019PCS2019	Simran Sejwal
	2017UCO1666	Saurabh Kumar Mittal
	2017UCO1688	Shekhar Karna

Team 21:

<b>P20: Emotion and Gender Classification</b> Implement a general convolutional neural network (CNN) building framework for designing real-time CNNs. The goal is to classify each facial image into one of the seven facial emotion categories “angry”, “disgust”, “fear”, “happy”, “sad”, “surprise”, “neutral”. Validate the model by creating a real-time vision system which accomplishes the tasks of face detection, gender classification and emotion classification simultaneously in one blended step using proposed CNN architecture. It should detect frontal face in image format. Train a CNN model architecture which takes bounded face (48 x48 pixels) as input and predicts probabilities of 7 emotion in output layers. <i>CNN, OpenCV, python, NumPy, Keras, TensorFlow, scipy.</i>	2019PCS2011	Richa Sharma
	2019PCS2012	Ritik Jain
	2017UCO1680	Shorya Kumar Pradeep
	2017UCO2514	Arushi Garg

Team 22:

<b>P21: Object classification app using Neural Networks</b> Design a system that performs object detection involving finding out which objects are present in an image. For example, a self-driving car that needs to detect other cars on the road. The process involves providing an Object to the application and in return the application will provide the description of the object and other vital characteristics. Suggestive approach involves Convolution Neural Networks, to solve optimisation problem. <i>CNN</i>	2019PCS2005	Anurag Sharma
	2017UCO1561	Sharlin Kumar
	2017UCO1688	Shekhar Karna

Team 23:

<b>P22: Fake Currency Recognition</b> Design a system which detects Fake currency by taking image as input using mobile camera. Make a database storing key points of each and every rupee note to detect its authenticity later on. <i>Neural Networks</i>	2019PCS2012	Ritik Jain
	2017UCO1666	Saurabh Kumar Mittal
	2017UCO2514	Arushi Garg

Team 24:

<b>P23: Handwritten Mathematical Expressions Recognition</b> Design a system which takes input in the form of image using mobile camera which recognise the expression and provide name of the mathematical expression. <i>Natural Language Processing</i>	2019PCS2009	Yathartha Anirudh Joshi
	2017UCO1698	Ayan Krishna Paul
	2016UCO2531	Yash Bansal

Team 25:

<b>P24: Personal Data Storage Recommender System</b> Design a recommender system which stores person’s mobile data like contacts, text messages, images, videos, etc. and provides	2017UCO1550	Anubhav Dhankhar
	2017UCO1560	Anmol Singh

recommendations (like type of food, places etc.) without sacrificing privacy. <i>Natural Language Processing</i>	2017UCO1675	Ankush Grover
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Team 26:

P25: <b>Handwritten Chemistry Equations Recognition</b> Design a system which takes input in the form of image using mobile camera which provides the name of the handwritten chemistry equation. <i>Natural Language Processing</i>	2019PCS2001	Sheetal bhati
	2017UCO1560	Anmol Singh
	2017UCO1675	Ankush Grover

Team 27:

P26: <b>Data Anonymous</b> Design a system that takes real data into account and make it anonymous to protect the privacy of the data. Especially in case of medical data where protection of patient's data is very crucial and ethical matter. <i>Natural Language Processing</i>	2017UCO1525	Vaibhav
	2017UCO1530	Tushar Gupta
	2017UCO1631	Arjun Singh