Ananya Pal

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EDUCATION

Master of Science in Computer Science **Fall 2020 - Spring 2022**
Arizona State University, Tempe, AZ 4.00 CGPA (out of 4)
Relevant Coursework: Data Mining, Semantic Web Mining, Software Project/Quality Management, Data Visualization, Fundamentals of Statistical Learning

Bachelor of Engineering in Computer Engineering **May 2015 – May 2019**
Maharashtra Institute of Technology, Pune, India 8.13 CGPA (out of 10)
Relevant Coursework: Object-Oriented Programming, Data Structures & Algorithms, Software Design, Machine Learning, Cloud computing, Mobile Computing

TECHNICAL SKILLS

Languages & Web technology: Java, Python, C/C++, R, JavaScript, HTML, CSS, D3.js, XML, PHP, React.js, Node.js
Tools, Databases, OS: Android Studio, Eclipse, Unity 3d, MySQL, PostgreSQL, MongoDB, Linux, Apache Spark, Amazon AWS

WORK EXPERIENCE

Graduate Teaching Assistant: Arizona State University, Tempe **Oct 2020 – Present**

- Boosted class average by 20% as Teaching Assistant for AMT 408 National Aviation Policy, guided students and provided timely feedback, prepared projects, graded assignments, conducted office hours
- Created solutions, notes for CSE 340 Principles of Programming languages, mentored, counseled, and evaluated exams and assignments for a class of 240+ students over 9 months

PROJECTS

Propaganda Technique Analysis (JavaScript, D3.js, Python), *Academic (CSE 578 Data Visualization)* **Sep 2021 – Dec 2021**

- Visualized propaganda techniques and biases contained in 143,000 newspaper articles from 15 different publications from Kaggle All The News Dataset, developed front-end using D3.js, HTML, and CSS and back-end using Flask in Python
- Devised 5 visualization panels including clustered bubble chart based on propaganda type and animated motion chart to show changing biases of newspapers over time, utilized NLTK, spacy libraries for named entity recognition in articles

Diabetes Data Analysis (Python, pandas, numpy, sklearn), *Academic (CSE 572 Data Mining)* **Oct 2020 – Dec 2020**

- Computed average per day percentage of records under hyperglycemic and hypoglycemic conditions from the diabetes dataset in the Medtronic 670G system (artificial pancreas medical control system), coded in Python (ML)
- Extracted useful meal and no-meal data from over 22,000 data samples recorded by the Continuous Glucose Sensor and Insulin Pump, trained an SVM classifier to categorize into meal and no-meal classes, achieved an accuracy of 80%
- Implemented K-Means, DBSCAN on generated feature matrix to create clusters of similar records with low SSE of 72,6

ReadForMe App *(Java, Android studio)*, *Personal Project* **May 2019 – Jul 2019**

- Designed and developed a mobile application in Android Studio (Java) to read the text aloud from any physical page, enabled learning for the visually impaired, optimized for 70% lesser storage with no need for pdfs or unnecessary files
- Integrated 2 APIs, Google Vision API for Optical Character Recognition and Google Text-to-Speech to read aloud
- Recognized text dynamically from 80% sources accurately and rated 4.6/5 on Google Play Store

Image Aesthetic Assessment (Python, opencv, sklearn, keras), *Academic (MIT Pune)* **Jun 2018 – Jun 2019**

- Built a Convolutional Neural Network (CNN) in Python and classified images as aesthetically pleasing or non-pleasing, coordinated a team of 4 and collected a dataset of 6000+ images satisfying 3 high-level photography rules
- Processed images into grayscale, resized and scaled into 128*128 images, and passed through 5 convolutional layers with Max Pooling and 2 fully connected layers (ReLU) and one output layer (Sigmoid)
- Achieved an accuracy of 68% through the Deep Learning model on the assembled dataset compared to traditional and Machine Learning (SVM) methods which only scored 40% (Computer Vision)

CERTIFICATIONS

AWS Cloud Technical Essentials **Jul 2020 – Present**

- Coursera, Offered by Amazon Web Services, Part 1 of AWS Fundamentals Specialization

SOCIETIES & ORGANIZATIONS

- Grace Hopper Celebration of Women in Computing (vGHC 2021), Society of Women Engineers (SWE), Women in Computer Science (WiCS ASU)

PUBLICATIONS

Assessing High Level Aesthetic Image Features using Deep Learning **Jan 2019 – Mar 2019**

- Ananya Pal, *"Assessing High level Aesthetic Image Features using Deep Learning,"* Journal, IJRASET