# ANISH OSWAL

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## EDUCATION

**Master of Science in Computer Science**                                                             May 2021
**Arizona State University, Tempe, AZ**                                                            3.74/4 GPA
RELEVANT COURSEWORK- Knowledge Representation, Data Mining, Social Media Mining, Distributed Database Systems, Data Visualization, Statistical Machine Learning, Artificial Intelligence, Systems Design for ML.

**Bachelor of Engineering in Computer Science and Engineering**                    May 2019
**Savitribai Phule Pune University, Pune, India**                                                  8.82/10 GPA
RELEVANT COURSEWORK- Machine Learning, Data Mining and Warehousing, Data Analysis, Advanced Data Structures.

## TECHNICAL SKILLS

- **Programming:** Python, R, Java, C#, C++, C, Clingo (ASP), JavaScript, HTML5, CSS, Bootstrap
- **Frameworks:** PyTorch, Scikit-Learn, SciPy, Keras, NLTK, Seaborn, Matplotlib, Plotly, TensorFlow, D3.js
- **Technologies:** AWS, Tableau, Android, WordPress, Git
- **Databases:** MySQL, PostgreSQL, Oracle, MongoDB

## ACADEMIC PROJECTS

**Understanding Machine vs Human Generated Text**                                          Fall 2020
- Engineered a model to extract **statistical measures of the language distribution** and incorporate them as features for classification using **bag of words** and **n-gram** techniques to classify human vs machine generated text in **Python**.
- Evaluated the classifier on LIAR and TweepFake datasets with **83.2%** and **78%** classification accuracy, respectively.

**Emotion Detection using Federated Learning**                                               Spring 2020
- Developed an emotion detection algorithm to eliminate privacy concerns of a user using federated learning utilizing **VGG-19, federated averaging** & **encryption methodologies** to achieve in **75%** accuracy using **PyTorch - Python**.
- Tested the algorithm on different edge devices on **multiple datasets** such as JAFFE, FERG, FER-2013 & FacesDB.

**Lifelong Planning Pac-Man**                                                               Spring 2020
- Programmed an optimal lifelong planning algorithm for Pac-Man using **A*, A* lifelong & D* lite algorithms** in **Python**.
- Constructed a **comparative report** on all the algorithms based on achieved scores, expanded nodes & execution time.

**Feature Engineering on CGM Time Series**                                                  Spring 2020
- Performed **data preprocessing**, **feature extraction, validation, verification** and **PCA** on raw CGM time series data signifying glucose levels of different patients on meal intakes using **Python**.
- Applied a sliding window on the data and performed **data visualization** resulting in **81%** prediction accuracy.

**Information Dissemination in a Graph**                                                      Fall 2019
- Implemented information dissemination to observe the propagation of an entity like a meme or a virus using **Python**.
- Integrated the algorithms (**NetShield, K-Edge addition & deletion**) into an ensemble system to maximize or minimize information spread through a network which can be further utilized to stop a virus or spread information on the web.

## PROFESSIONAL EXPERIENCE

**Arizona State University: USA | Web Developer**                                    Dec 2019 – Present
- Developed, redesigned, and managed Arizona State University websites from scratch using **WordPress, HTML** & **CSS**.
- Assisted students & faculty with **debugging their codes** along with other IT related **hardware and software issues**.

**InProspect Technologies: India | Android Developer (Intern)**               Jun 2018 – Aug 2018
- Led the **UI & UX Design** team on **Material Design** schematics for building an education eccentric android application.
- Administered **User Analytics**, Front-end & Back-end app development using **Python** & **Java for Android.**

**A.B. Enterprises: India | Software Engineer (Intern)**                       April 2017 – March 2018
- Implemented & deployed a **Stock Management & Sale Analysis** Software using **Java**, **Python**, **MySQL** & **MongoDB**.
- Constructed a local **cloud server** for inhouse technical management resulting in **20% increased work productivity**.