

# ANISH OSWAL

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## EDUCATION

### Master of Science in Computer Science

Arizona State University, Tempe, AZ

May 2021

GPA: 3.74/4

**Relevant Coursework:** Data Mining, Info Assurance & Security, Distributed Database Systems, Data Visualization

### Bachelor of Engineering in Computer Science and Engineering

Savitribai Phule Pune University, Pune, India

May 2019

GPA: 8.82/10

**Relevant Coursework:** High Performance Computing, Cloud Computing, Data Analysis, Advanced Data Structures, Software Engineering & Project Management, Soft Computing & Optimization Algorithms, Software Modeling & Design

## TECHNICAL SKILLS

**Programming:** Python, Java, C#, C++, C, Clingo (ASP), JavaScript, HTML5, CSS, Bootstrap, D3.js, React.js, Scala

**Technologies:** AWS, Tableau, Android, WordPress, Git, Docker, Selenium, Visual Studio

**Databases:** PostgreSQL, MySQL, Oracle, MongoDB

**Certifications:** MTA - Security Fundamentals: Microsoft, C Programming: SEED Infotech

## PROJECTS

### Post-Disaster Visualization Dashboard | [GitHub](#)

Fall 2020

- Developed an interactive visualization dashboard to determine the problems in a city using social media data in a post-disaster scenario to recommend allocation of emergency resources & gather deeper insights.
- Programmed the dashboard using Python for data engineering and, HTML5, CSS, JavaScript and D3.js for visuals and back-end.

### Geospatial Hotspot Analysis | [GitHub](#)

Fall 2020

- Applied spatial statistics to spatio-temporal big data in order to identify statistically significant hotspots.
- Performed two different types: Hot zone analysis and Hot cell analysis on a joint point rectangle, and a NYC taxi trip dataset (2009 - 2012) using Apache Spark - Scala.

### Data Processing at Scale

Fall 2020

- Designed a query processor to manage data partitioning and pipelining for distributed database systems using PostgreSQL.
- Engineered a map-reduce algorithm program using Hadoop framework and Java.

### Path Planning Pac-Man | [GitHub](#)

Spring 2020

- Programmed various optimal graph search algorithms like A\*, A\* lifelong D\* lite algorithms along with adversarial search algorithms like Minimax, Expectimax and Alpha-Beta Pruning for path planning in Pac-Man domain using Python.
- Constructed a comparative report on all the algorithms based on achieved scores, expanded graph nodes & execution time.

### Information Dissemination in a Graph | [GitHub](#)

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 used to stop a virus or spread information on the web.

### Software Development for Laser Marking Machines

Fall 2018 - Spring 2019

- Assembled 3 modules: Automation of laser marking jobs, camera orientation & image correction, & real-time error detection into a desktop software for automating the laser marking machines at Suresh Indu Lasers Pvt. Ltd.
- Engineered the software using C#, Java, VS19, Python & also published a paper in an *International Journal (IJIRSET)*.

### Online Forum & Socialization Platform

Fall 2018

- Launched a college-level personal forum for student-student, teacher-student & administration interaction for promoting online announcements, in-college socialization & academic discussions in Vishwakarma Institute of Information Technology, Pune.
- Deployed the web app and the desktop software end using Java, HTML5, AWS, CSS, SQL, JavaScript & Bootstrap.

## WORK EXPERIENCE

### Software Engineer - Arizona State University, USA | [3DConcrete](#) | [TOMNET](#) | [SSEBE](#)

Dec 2019 - Present

- Teamed up with teams across various departments to engineer and document source code in Java and Python.
- Developed, redesigned, and managed Arizona State University websites from scratch using WordPress, HTML, CSS & JavaScript.

### Android Developer Intern - InProspect Technologies, India

Jun 2018 - Aug 2018

- Led the UI & UX Design team on Material Design schematics for building an education eccentric android application.
- Administered User Analytical data, Front-end & Back-end app development using Python & Java for Android.
- Collaborated in grooming, optimizing & testing various algorithms leading to 30% increased processing efficiency.

### Software Engineer Intern - A.B. Enterprises, India

Apr 2017 - Mar 2018

- Implemented & deployed a Stock Management & Sale Analysis Software using Java, Python, MySQL & MongoDB.
- Constructed a local cloud server for in-house technical management of computer software and printers.
- Attained 20% increased work productivity & profits from the introduction of management software for the company.