# Swati Adhikari

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## **EDUCATION**

University of Mississippi, Oxford, MS

May 2020

Major: Bachelor of Science, Computer Science, Minor: General Business

Cumulative GPA: 3.78/4.00

**Relevant Coursework**: Data Structures and Algorithms, Database Management, Discrete Mathematics and Probability, Fundamentals of Data Science, Introduction to Computer Networks, Software Design and Development, Statistics

#### RESEARCH EXPERIENCE

Undergraduate Research Honors Thesis on "Detection of Sockpuppet Accounts on Reddit" under the supervision of Dr. Philip Rhodes at <a href="https://egrove.olemiss.edu/hon-thesis/1534/">https://egrove.olemiss.edu/hon-thesis/1534/</a>

# Department of Computer Science, University of Mississippi, Oxford, MS

January 2020 - May 2020

Undergraduate Researcher, Security and Big Data Analytics (PySpark, SQL, Hadoop, TF-IDF, k-Means clustering, multilayer perceptron classifier)

- Studied and analyzed the detection of over 2.6 million Reddit accounts retrieved and stored in the dirt cluster of Computer Science department
- Optimized data collection procedures and generated reports on a monthly basis

• Involved in Analysis, Design, Coding and Development of custom interfaces

• Wrote queries and trained the data with the entities of a list of sockpuppet accounts published on Reddit

## **HONORS AND AWARDS**

Dean's Honor Roll, University of Mississippi, Oxford, MS	2020
Grace Hopper Scholar, AnitaB.org: Global Organization for Women Technologists	2018
Academic Excellence Scholarship, University of Mississippi	2016 - 2020

#### PROFESSIONAL EXPERIENCE

Vastika Inc., Irving, Texas

August 2020 - Present

- Java Developer Intern (Java, J2EE, Spring, Hibernate, Oracle)
- Designed and maintained the interface and backend services for the web application using Java and J2EE technologies like Spring, Hibernate, UI
- Stored and retrieved data to and from the Oracle database using Java related technologies

Ericsson, Plano, TX May 2019 – August 2019

Data Analyst Intern, Managed Services (Python, Elasticsearch, Selenium, Logstash, Kibana)

- Developed a proof of concept to analyze and visualize Network Packet files provided by customers to help engineers tackle complex network problems with Elasticsearch and Kibana
- Performed web automation on data from RedHat with Python and Selenium and conducted data cleansing to further organize the data
- · Collected, organized, analyzed and disseminated information to analyze datasets using SQL

# **PROJECTS**

#### **Natours Site**

- Built a travel and tours web app allowing users to create itineraries for vacations and book directly with tour groups using Stripe API payments
- Enhanced the security of the application by programming authentication and authorization using JSON Web Tokens
- Programmed a RESTful API using Node.js which in turn communicated with the frontend to process and store all the tour, user and user reviews data in MongoDB

## Food Delivery Web App

- Developed a food delivery app allowing restaurant owners to add their restaurant information to the database, customers to order meals from a variety of restaurants and drivers to register and deliver the orders to customers
- Programmed the site using HTML5, CSS, Bootstrap, jQuery, JavaScript, NoSQL and Firebase following SCRUM and Agile
  methodologies

# **Social Networking site for Students**

 Built a social networking site allowing students to have discussions with fellow classmates where they can post discussions, like and comment on posts • Programmed the site using HTML5, CSS, Bootstrap, jQuery, JavaScript, AJAX, MySQL, SQL and used sessions to ensure the security of the application

# **Maze Recognition Model**

- Created a maze recognition model using feedforward neural network with 90% accuracy differentiating maze and non-maze
- Used randomized Kruskal's algorithm to create mazes

#### **Image Analysis**

 Created a motion detection model from images of University cameras using Python and OpenCV by splitting layers, greyscaling, masking, and image processing

## **UNIVERSITY SERVICE**

#### **Distance Learning Facilitator**

January 2019 – April 2020

Division of Outreach and Continuing Education, University of Mississippi, 2019-2020

- Assisted students with distance learning including managing individual schedules, individual or small group web conferencing, log in assistance, assignment oversight and tracking
- Assisted faculty to teach in an online environment

Student Assistant October 2016 – December 2019

Leadership and Counselor Education, Department of Education at University of Mississippi, 2016-2019

- Helped with filing and maintaining student records
- Organized and planned events for students within the Department
- · Received calls, assisted the faculty and served as a student representative for the Department

# **PROFESSIONAL AFFILIATIONS**

Association of Computing Machinery at OleMiss, Past Member: 2019-2020

AnitaB.org, Active Member: 2019 - present

## **TECHNICAL SKILLS**

Language: Java, Python, JavaScript, C, PHP, Golang, XML, JSON

**Front End**: jQuery, AJAX, HTML5, CSS, Bootstrap, Angular **Back End**: Node.js, Express.js, MVC, Spring, Maven, Hibernate

Database and Data Analysis Tools: PostgreSQL, MySQL, MongoDB, SQL, NoSQL, Elasticsearch, Firebase, Pandas, NumPy,

Matplotlib, Seaborn

Methodologies: Agile Software Development, Scrum, SDLC, Object Oriented Programming, Test-driven Development