

# ASHMI BARAL

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## EDUCATION

**The University of New Mexico**, Albuquerque, NM coursework Jan2022 -Dec2023  
Master of Science in Business Analytics and Cybersecurity  
*Coursework: Data Mining, Data Analytics, Machine Learning, Principles and Applications of Big Data*

**ACE Institute of Management**, Kathmandu, Nepal Aug2018 - Dec 2020  
Master of Business Administration

**Nepal Engineering College**, Bhaktapur, Changuarayan Nov 2012 - April 2017  
Bachelor of Electronics and Communication Engineering

## SKILLS

- **Programming Languages:** C, C++, Java, Python, R, HTML
- **Database Management:** MySQL, Oracle10g, SAS Studio, Tableau, SPSS, Machine Learning Algorithms, PowerBI
- **Frameworks and Tools:** MATLAB, Swift 3, Amazon WebServices, JSON, Jira, Google Cloud Platform, Azure
- **Testing Tools:** Selenium Driver, Jmeter, Blazemeter, Postman
- **Health Care Terminologies:** HIPAA Policies, Electronic Health Information (EHI), Electronic Health Record, Healthcare Revenue Cycle, Health Care Revenue Optimization Strategies

## WORK EXPERIENCE

**University of New Mexico**, Albuquerque, New Mexico, USA Jan 2022 – Dec 2023

### Research Assistant and Teaching Assistant

- Built a **Targeted Sentiment Analysis (TSA) (RoBERTa)** model to aggregate targeted sentiments expressed on the entities from social media data and improved existing model by 60%.
- Used Natural Language Processing (NLTK) techniques to analyze data related to the abundance of data analytics positions within universities across the United States.
- Instructed a diverse group of 35+ students in the intricate domains of data analytics and database management systems.
- Provided hands on assistance to students in various experiments and various calculations.

**Cedar Gate Technologies**, Kathmandu Nepal (*Healthcare Based Software Company*) July 2019 - Dec 2021

### Data Quality Assurance Engineer

Aug 2020 – Dec 2021

- Created and executed an efficient Page Object Model (**POM**) automation framework using **Selenium WebDriver**, **Java**, and **Cucumber for BDD** (Behavior-Driven Development) scenarios.
- Managed project activities using Jira as a project management tool and leveraged **Zephyr** for Test Management.
- Enhanced web application compatibility across multiple browsers and devices, achieving an 80% increase in cross-platform performance and user experience through the effective utilization of **Browserstack**, **Lambda Test**, and **similar tools**.
- **Prepared and executed** comprehensive documentation of **test plans**, **test cases** and **test scenarios** for **data validation** and **verification purposes**.
- Used agile methodologies, such as **Scrum**, to manage project timelines, prioritize features, and ensure timely delivery of high-quality software releases.
- Collaborated closely with developers to swiftly resolve technical issues and defects within the software, resulting in a nearly 50% increase in work efficiency.
- Conducted thorough **regression**, **functional**, **performance**, **usability** and **smoke** tests to identify and documented software bugs and reported them to the development team.
- Configured **Maven** for **JAVA** automation projects and developed a Maven Project Object Model (**POM**) utilizing Git as a version control system.
- Conducted **unit testing** on various app features to identify the most effective monetization strategies and user engagement tactics, resulting in a 30% increase in revenue and a 15% increase in user retention rate.
- Acted as a mentor and coach to junior developers, providing guidance and support on best practices for software development, architecture, and design patterns.

- Conducted **code reviews**, **identified** and **resolved bugs**, resulting in a 30% reduction in code defects and **improved** code **maintainability** and **scalability**.
- **Supported** and **facilitated** business/functional requirement review, approval, and sign-off sessions, ensuring project alignment and formalized scope.
- **Implemented** and **enforced** accessibility, compliance, and security standards in various **projects** and **initiatives**.
- Participated in cross-functional teams, including **UX designers**, **QA testers**, **product managers**, **stakeholders** to **define document**, **manage project requirements**, **user stories**, **acceptance criteria**, and **hotfix release**, **product release**, **sprint plans**, resulting in improved collaboration and alignment across teams.
- Effectively managed project lifecycle from initiation to closeout, including the **development** and **oversight of project scope**, **schedules**, **budgets**, **contracts**, and **compensation strategies** through effectively utilizing **SDLC** methodologies, resulting in a remarkable 70% increase in **project efficiency**.
- **Improved** email campaign **efficiency** and **accuracy** by 80% through the implementation of advanced testing methodologies and tools like **Litmus** and **Email on Acid**.
- **Leveraged** expertise in business modeling tools, particularly **Visio**, **Trello**, **Azure** and **swot analysis**, for creating **visual representations of complex business processes** and **systems**, enhancing **cross-functional team** communication, and driving process improvements.
- Created a **knowledge base** and **training materials** to educate developers and internal customers on how to use the **Jira** platform effectively, resulting in a 40% reduction in support tickets and increased customer self-service.

**F1 Soft International, Kathmandu, Nepal**

Feb 2017 – June 2019

**Software Developer**

- Developed **automated solutions** to generate sentence similarity scores for medical and drug terminology of different country labels, using **Python**, **MYSQL**, **WordNet**, and **MedDRA** database for a healthcare organization by increasing the efficiency rate by 88.77%.
- Leveraged analytical tools such as **SQL**, **SPSS/R/SAS**, **Python**, and **data visualization** platforms like **PowerBI** and **Tableau** to generate statistical figures. This data-driven approach resulted in a 70% improvement in decision making process.
- Conducted extensive research and analysis to identify the most relevant and effective **natural language processing techniques** and **tools** for the **healthcare domain**, resulting in a 25% improvement in accuracy and performance compared to existing solutions.

**PROJECTS**

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**Analyzing the effect of climate change on sales of amazon products**

- Processed **Excel** data and employed **Logistic Regression** in **R** to analyze the impact of climate change on Amazon product sales, which was found to be **75% accurate** using regression metrics for assessment.

**Sentimental Analysis of Product Reviews of People in social media Using Three Different Techniques**

- Performed **Vader Analysis**, **Text Blob Analysis**, and **Manual Analysis** using **Python** for product reviews on social media. Additionally, manual analysis was conducted in Excel. The analysis revealed an **accuracy rate of 80%** in evaluating customer feedback for various products across the three techniques.

**Programming and Security Attacks: Secret Key Encryption, Buffer Overflow and SQL Injection**

- Utilized security tools such as **Wireshark**, **Metasploit**, **Burp Suite**, and **Nessus** to gain practical experience in writing programs and executing security attacks on secret-key encryption, buffer overflow, return-to-libc, and SQL injection. Improved security mechanisms and **accuracy by 60%**.

**CERTIFICATIONS**

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| • Machine Learning with Scikit – Learn | Datacamp – Completed on Sep 29, 2022   |
| • Introduction to Python               | Datacamp – Completed on April 29, 2022 |
| • Intermediate Python                  | Datacamp – Completed on April 30, 2022 |

**ACHIEVEMENTS AND AWARDS**

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**Cooperative Grant Winner 2019, Cooperative Association of Nepal**

- Received grant for best Graduate Research Topic “Factors Influencing Borrower’s Satisfaction of Cooperative in Kathmandu Valley.”

**International Amigo Scholarship**

- Awarded by UNM for being an outstanding graduate student.