Shubham **Mankar**

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Education

Master of Computer Science at North Carolina State University, Raleigh Aug 2021 – May 2023

- **Coursework:** [GPA 4.0/4.0] Design & Analysis of Algorithms, Automated Learning & Data Analytics, Software Engineering, Database Systems, Software Security, User Experience
- **Assistantship:** Closely working with the Computer Science Department as an Accreditation Assistant

Bachelor of Engineering in Computer Engineering at University of Mumbai Aug 2016 – Nov 2020

- **Coursework:** [GPA 8.7/10.0] Natural Language Processing, Operating Systems Fundamentals, Data Structures, Machine Learning, and Discrete Mathematics
- **Academic Publications:** Co-authored a research paper published at IEEE's ICAC3 Conference in 2019 titled 'Data Mining in Educational Systems for Effective Student Mentoring'

Skills

- **Languages:** Python, JavaScript, Golang, Java, C
- **Web Technologies:** HTML, CSS, VueJS, AngularJS
- **Frameworks:** Alexa Skills Kit, Django, Flask, NLTK, AWS, Git
- **Databases:** PostgreSQL, Firebase, DynamoDB

Work Experience

Software Development Engineer at Nudron IoT Solutions, Mumbai Jul 2020 – Apr 2021

- **Full Stack Development:** Single-handedly delivered web application for a Device Management Dashboard using VueJS, Golang, and AWS, including DynamoDB and Lambda, to be served to over 70,000 users
- **WebSocket Implementation:** Developed a WebSocket based chat interface for customer support with automatic user-agent allocation with an average response time of under 100 milliseconds
- **Deployment Pipeline:** Created a development pipeline using Jira and AWS CodePipeline, automating the deployment process, and reducing deployment time by over 30%
- **Accountability:** Worked in a fast-paced startup environment with full ownership of software delivery

Web Development Intern at Tata Consultancy Services, Mumbai Jun 2019 – Aug 2019

- **Teamwork and Leadership:** Lead a group of 3 interns in developing a Medical Appointment System
- **Database Design:** Responsible for implementing an SQL database with over user 100,000 entries
- **API Development:** Programmed an API as a bridge between the database and the web application using the Java Springboot framework

Academic Projects

- **Machine Learning:** Programmed a ML model to classify biomarkers in cancer patients using MRI images. Implemented various models using CNN, Resnet and SVM to compare the performance of the models and MRI images. Trained over 16,000 MRI scans to identify tumors with an accuracy of 60%
- **NLP and Web:** Implemented an Alexa Skill with a complimentary website for medical monitoring through conversation using Angular, JavaScript, and Python. Developed an API for NLP using Pandas, NLTK, word2vec, and the Flask that enabled Alexa to extract conversational semantic information
- **Software Engineering:** Developed a command-line tool and an API that scrapes popular e-commerce websites and provides quick price comparisons using Python, Flask, and BeautifulSoup.
- **Visual Algorithms:** Created a web application that visually represented some standard algorithms by showing each algorithm's progression for any given input. This project uses VueJS, HTML, CSS, and JavaScript to update its state to describe the sequence of steps the algorithm takes