Rohit Naik

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EDUCATION

North Carolina State University Raleigh, NC *Aug 2017 - Dec 2018*
Master of Computer Science ***CGPA: 4.0/4.0***

- **Courses**: Parallel Systems, Software Engineering, Algorithms, Internet Protocols, Foundation of Data Science.

Sardar Patel Institute of Technology Mumbai, India *Jul 2013 - Aug 2017*
Bachelor of Engineering in Computer Engineering ***CGPA: 8.73/10.0***

- **Teaching Assistant** for the subjects 'Structured Programming Approach' using C language and 'Object Oriented Programming Methodology' using Java (2015 - 2016).
- **Head of Events –** Computer Society of India - S.P.I.T. branch (Tech student body), technical festival MATRIX (2016).

PROFESSIONAL EXPERIENCE

Software Development Engineer II Amazon Inc. *Seattle, WA* *Jun 2021 - Present (1 mos)*
Software Development Engineer I *Feb 2019 - Jun 2021 (2 yr 3 mos)*

- *Alexa (1yr 9mos)*
  - Designed and developed a data resolution component which provides APIs to populate empty input structures with information needed for displaying it on the screen, for the new video home experience on Echo Show devices, used by more than 200,000 customers globally on a daily basis.
  - Designed API contracts for allowing contextual selection of video home cards on echo show devices.
  - Designed a system to isolate video experiences as loosely coupled nodes, and an orchestrator to provide an interface to easily consolidate these nodes to create a large variety of experiences, with minimal additional developer effort.
- *Fulfillment technologies (7 mos)*
  - Performed scaling of two critical services with >500,000 transactions per second each, for Prime Day 2019.
  - Automated the process of updating security certificates for our cache fleet, and increased deployment speed by 75%.

Software Engineering Intern Google Inc. Mountain View, CA *May 2018 - Aug 2018 (3 mos)*

- Improved accuracy of an existing system in Google Mobile Ads SDK for ad view visibility calculation.
- Exceeded performance expectation of 4-5ms for the new algorithm for complex view hierarchies, by taking < 0.01ms instead.

Software Engineering Intern Tata Institute of Social Sciences Mumbai, India *Jul 2016 - Oct 2016 (4 mos)*

- Developed PHP and MySQL based backend system, enabling dynamic content retrieval in an Android application from a remote data store, reducing data retrieval time from > 3 sec to around 1 sec.

PUBLICATIONS (NON-ACADEMIC)

Machine learning - Malicious Web Content Detection Using Machine Learning *(Python, PHP, JavaScript) (2016-17)*

- Devised a module for extracting features from a webpage and its URL using Python libraries - 'BeautifulSoup' and 'urllib'.
- Used a random forest classification model for predicting class labels for web pages with a testing accuracy of 96.11%.
- Published a paper with the above title at IEEE RTEICT, May 2017, India (DOI: 10.1109/RTEICT.2017.8256834).

Data Science - Skin Disease Detection *(Python, PHP, theano, Data pre-processing) (2016-17)*

- Built a skin disease image classification model using Python libraries - 'lasagne' and 'nolearn' with an 85% accuracy.
- Submitted a paper - 'An Artificial Intelligence approach for the recognition of early stages of - ECZEMA' which is accepted for publishing in the IJMEI journal (DOI: 10.1504/IJMEI.2020.10019990).

PROJECTS

Parallel computing - Image processing using CUDA *(C, CUDA, Message Passing Interface) (2018)*

- Wrote a program to generate a lake configuration with pebbles and ripples using CUDA parallelization and message passing.

Scheduling algorithm - Personalized task scheduling bot *(Python, MongoDB, NodeJS, Google Calendar API) (2018)*

- Developed an algorithm, working in a team of 4, to generate weekly schedules based on pending tasks and dependencies between tasks, and export the schedule directly to Google Calendar.

App development - smartART *(Java, Android, Google Vision API) (2018)*

- Created an Android application during PackHacks 2018, for children in Kindergarten to learn, understand and recognize day-to-day objects better, by integrating Google Vision API and 3-D object rendering.

SOFTWARE SKILLS

- *Programming Languages*: Python, Java, C, Objective-C
- *Operating Systems*: Windows, Linux, MacOS