

# TIRUPAL RAO RAVILLA

100 CLEARWATER DR, UNIT 160, FALMOUTH ME • 848-203-9299 • RAO.TIRUPAL@GMAIL.COM

## SUMMARY

Dynamic and creative software developer with over 4 years of industrial experience in product development, producing robust code for high-volume companies, developing web applications, focusing on conversational AI and text analytics; and excelling at an array of skills from back-end development, full stack development, data science to integrations, builds and deployments for multiple projects.

## EDUCATION

<b>New York University, Tandon School of Engg, New York NY</b> <i>Master of Science in Computer Science</i>   3.7 GPA   05/2020	<b>Jawaharlal Nehru Technological University, AP, INDIA</b> <i>B. Tech in Computer Science &amp; Engg.</i>   72% (96 <sup>th</sup> percentile)   05/2012
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## TECHNICAL SKILLS

**Languages:** Java, Python, JavaScript, SQL | **Backend:** REST, J2EE, JMS | **Databases:** MongoDB, MySQL, OrientDB  
**Web Technologies:** AngularJS, VueJS, HTML5/CSS, jQuery | **Project Tools:** Git, SVN, Eclipse, VSCode, Gradle, Maven, JIRA, Docker,  
**Other Frameworks & Tools:** Apache Tomcat, Apache Http, Flask, Django, NuxtJS, Scikit, Keras, TensorFlow, Jupyter, UIMA, CRFSuite, OpenNLP, NLTK, OpenDial, StoryBlock | **Data Science:** Data Engg., traditional ML, Deep Learning (CNN, RNN, LSTM)  
**Cloud:** AWS (S3, Cognito, Lambda, EC2, Elasticsearch, Rekognition, Kinesis, Lex etc.), Azure, GCP

## WORK EXPERIENCE

**NEW YORK UNIVERSITY, New York NY** | Title: Graduate Teaching Assistant (For: **DevOps** course) | 01/2019 – 05/2020

- Lead an open source [Course Builder website](#) project as part of a DevOps guided studies program ([CourseBuilder](#))
- Lead DevOps student teams on a [Newsletter](#) project for NYC Department of Records, an agent-based modeling system - [indras-net](#)

**EFF CREATIVE GROUP, New York NY** | Title: Full Stack Development Intern | 06/2019 – 08/2019

### Projects: WeSearchWatches and TickerTocker

- Developed APIs, UI, and added AWS Cognito, Route53, CloudFront for **WeSearchWatches** – a comparison website for luxury watches
- Added widgets and custom features to the UI of **TickerTocker** - a trading productivity platform

**ACCENTURE SOLUTIONS PRIVATE LIMITED, Bangalore, India** | Role: Software R&D Engineer Lead | 05/2015 – 07/2018

### Project: ATL - RHEA Conversational AI and RHEA Smart Entertainment

Highlights and Achievements	Roles and Responsibilities
<ul style="list-style-type: none"><li><b>Improved scalability &amp; performance(by~70%)</b> by wrapping modules into <b>microservices</b> and parallelizing the service calls</li><li><b>Reduced processing time by ~75%</b> by restructuring code/logic</li><li>Designed databases and backend system for a chatbot platform</li><li>Lead a dev team to successfully deliver multiple pilots projects</li><li>Published a research paper on Critiquing based Dialog System, and filed two patents: 'Interactive Content Recommender' and 'Spoken Language Understanding (SLU) system' as a co-inventor</li></ul>	<ul style="list-style-type: none"><li>-Senior Software Engineer (lead) in a team of ten focusing on Java and python - based backend development, to build virtual agents</li><li>-Designed and setup MongoDB and MySQL databases</li><li>-Built a Java based Dialog Mgmt. module (with OpenDial and Java) SLU system (with ML/NLP, Python)</li><li>-Built REST services for those in Java (Jersey) and Python (Flask)</li><li>-Managed integrations, builds and deployments (Maven/Gradle)</li></ul>

### Project: ATL - Savant: Testing Virtual Agent | Title: Software Engineering Analyst; Role: R&D Sr Engineer

- Broke down complex project structure into simpler modules and designed a robust and light-weight backend system
- Quickly learnt JMS, AngularJS, JBoss Drools to build a web-app
- Successfully demonstrated work to clients and received awards
- SE in a team of ten to build multi-virtual agent desktop platform
- Customized Java-based NLP modules, and built an Alerts and recommendations system using JMS and AngularJS
- Designed and managed MongoDB and MySQL databases

### Project: ATL - HR Recruitment Advisory | Title: Software Engineering Analyst

- Software Engineer(R&D) in a team of six to build a Resume processing, matching, and ranking research project
- Developed NLP based custom components to process unstructured text in Resumes and JDs; also managed builds and deployments

**COGNIZANT TECHNOLOGY SOLUTIONS, Chennai, India.** | Title: Programmer Analyst | **Project: SeeBeyond Conversion** | 04/2013 – 02/2014

- Learnt SOAP and REST webservices, followed Agile development and finished the project earlier than scheduled
- Developer in a team of eight to develop REST services for a commercial insurance client portal replacing legacy JMS system

## ACADEMIC WORK / PROJECTS

- Temporal Orientation : A scheme and Corpus for Classifying Temporal Orientation in Political Speech ([temporal-orientation](#))
  - NLU Research project on **analyzing future and past temporal orientation, using Bi-RNNs, BiLSTMs, and SVM.**
- Classification of **toxicity in civil comments using BiLSTMs and stacked traditional ML models** ([Comment Toxicity](#))
  - ML and Big Data project to train models on 1.8 million sentences, primarily using python, Keras, TensorFlow, and pySpark.
- AWS cloud projects: 1. Virtual Assistant for Meetups ([Meetup Assistant](#)) 2. Smart door simulation([smart-door](#)), 3. Private Album Search ([Photo-Search](#)), 4. Dining ChatSsbob([DiningBot](#)).
- A Data Engg. project to analyze the economic impact of COVID-19 using stock market and unemployment data ([covid-19-analysis](#))
- Grad Courses: **Algorithms, Cloud Computing, AI, Machine Learning, Natural Language Understanding, Computer Vision, Big Data.**

## AWARDS & ACCOMPLISHMENTS

- Got an ACE (Accenture Celebrates Excellence) award, three Accenture Labs Sunshine awards, for innovation & exemplary contributions
- Published a research paper at NLDB 2018 and filed three patents over-all related to conversational AI research as co-inventor.
- Been the Class Representative (CR) in the last four semesters of undergrad; and placement coordinator for a class of 60 students.