

Arjun R. Rao

SOFTWARE DEVELOPER · SPEAKER · RESEARCHER

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Education

M.S. Ramaiah Institute of Technology (RIT)

B.E. IN INFORMATION SCIENCE AND ENGINEERING

- CGPA: 9.41/10

Bangalore, India

Aug. 2014 - June 2018

Experience

Stride.ai Inc.

NLP ENGINEER

- Working on text classification and hierarchical clustering problems, optimized for low resource datasets.
- Lead frontend developer, responsible for UI design and implementation for several projects.
- Developed interactive visualizations in D3.js supporting real-time visualization updates, user feedback etc.
- Lead developer for a custom PDF Viewer built using pdf.js that allows for user annotations functions and additional capabilities. The viewer is being used in 10+ Projects.
- Technologies Used: Python, Keras, Tensorflow, D3.js, Angular, PDF.js, Internal tools

Bangalore, India

July 2018 - Present

RESEARCH AND DEVELOPMENT INTERN

- Optimized Named Entity Recognition models in a production project to improve accuracy by combining standard NER datasets with context specific data.
- Implemented end to end web based projects for process automation using Django, Angular and internal libraries.
- Built scrapers for automatically extracting information from multiple websites involving simulation of complex UI interactions.
- Technologies Used: Django, Selenium, Angular, CoreNLP, Internal tools

Jan. 2018 - May 2018, Oct. 2016 - Dec. 2016

Cloud Developer Relations, Google Inc.

DEVELOPER PROGRAMS ENGINEER INTERN

- Built tools to help track code repositories and generate customized notifications, for faster triage of issues.
- Part of the project was released as open source software, and can be found at github.com/GoogleCloudPlatform/issuetracker
- Technologies Used: Google Cloud Datastore, Google BigQuery, Google App Engine, GoLang, Angular

San Francisco, U.S.A

June 2017 - Sept. 2017

M.S. Ramaiah Institute of Technology

TEACHING ASSISTANT, APPLIED CS WITH ANDROID COURSE (4 CREDITS)

- Teaching Assistant for Applied CS with Android Course designed in collaboration with Google.
- Handled 25 two-hour tutorial sessions for a class of 52 students.
- Developed codelabs, internal sites, auto grading systems for assignments.
- Based on my work, RIT was selected as one of the 5 universities worldwide, to be featured in a case study for University Adoption of the program. [Link]
- Technologies Used: Android, Java, GoLang, Javascript

Bangalore, India

Jan. 2017 - May. 2017

FACILITATOR, GOOGLE APPLIED CS WITH ANDROID PROGRAM

- Conducted 5 cohorts of 16 hour Applied CS workshops for over 150 students as a campus facilitator for RIT.
- Recognized as a top facilitator for the academic year of 2016-2017 in the program.
- Technologies Used: Android, Java

Feb. 2016 - Dec. 2016

CSIR- Central Electronics Engineering Research Institute

RESEARCH FELLOW, INDIAN ACADEMY OF SCIENCES SUMMER RESEARCH FELLOWSHIP (IAS-SRFP 2016)

- Research project titled "Catadioptric Scene Analysis" at the Computer Vision Lab, CSIR-CEERI under Prof. Santanu Chaudhury.
- Worked on implementation of unwrapping algorithms and evaluation of computer vision algorithms for pedestrian detection on catadioptric images.
- [Link to Report]
- Technologies Used: Matlab - Computer Vision Toolbox, OpenCV

Pilani, Rajasthan, India

June 2016 - Aug. 2016

Publications

PAPERS

Milo: A visual programming environment for Data Science Education

Lisbon, Portugal

ARJUN R RAO, AYUSH BIHANI, MYDHILI K NAIR

Oct. 2018

- Proceedings of 2018 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC'18), pp. 211-215. [PDF]
- Designed and implemented a novel visual programming environment to help novice students and non-programmers learn Data Science and ML concepts using block based programming.
- DOI: 10.1109/VLHCC.2018.8506504

Context Based Approach for Second Language Acquisition

New Orleans, USA

NIHAL V NAYAK, ARJUN R RAO

June 2018

- System paper for Duolingo's shared task on Second Language Acquisition Modelling (SLAM 2018). [PDF]
- Published in the Proceedings of the NAACL-HLT Workshop on Innovative Use of NLP for Building Educational Applications (BEA at NAACL 2018).
- Trained a logistic regression model to predict the likelihood of a student making a mistake while answering an exercise on Duolingo. Made use of features inspired by research in code-mixed language learning where context plays an important role.
- Result: AUROC scores for English/Spanish = 0.821, Spanish/English = 0.790 and French/English = 0.812. 2nd best linear model, finished 9th overall in SLAM 2018

BOOK CHAPTERS

DearDiary - An IBM Watson Powered Mental Healthcare Tracker

Springer, Singapore

ABHILASH K, AMISHA A, ANISHA M., ARJUN R RAO

Nov. 2017

- Book Chapter in Applications of Cognitive Computing Systems and IBM Watson, published by Springer, Singapore.
- DOI: 10.1007/978-981-10-6418-0_8

Big Data Predictive Modeling and Analytics

Bangalore, India

MYDHILI K NAIR, ARJUN R RAO, MIPS A PATEL

Oct. 2017

- Book chapter in Big Data Analytics: Tools and Technology for Effective Planning. (ISBN 9781138032392)
- Published by CRC Press Taylor & Francis Group.

Data Migration Techniques from SQL to NoSQL

Bangalore, India

MYDHILI K NAIR, NIHAL V NAYAK, ARJUN R RAO

Mar. 2017

- Book chapter in NoSQL: Database for Storage and Retrieval of Data in Cloud. (ISBN 9781498784368)
- Published by CRC Press Taylor & Francis Group.

Honors & Awards

NATIONAL

Winning Team, Hackathon Challenge, IBM Collaborative Academia Research Exchange (ICARE 2016)

Oct. 2016

Fellow, Indian Academy of Sciences Summer Research Fellowship Program 2016

June 2016

Finalist, Build the Shield 2016 - Cyber security contest by Microsoft

Mar. 2015

REGIONAL

Best Outgoing Student (Batch of 2014-2018), Dept. of Information Science and Engineering, RIT

June 2018

Best Performer, PAYSE Ethical Hacking Challenge at RIT Bangalore, by Nucleus Software

Mar. 2017

Winner, Hackathon, Emprereal 2017 at RIT Bangalore

Feb. 2017

Talks

Apps Script Study Jam

Bangalore, India

FACILITATOR FOR GDG BANGALORE'S WORKSHOP ON GOOGLE APPS SCRIPT

Feb. 2018

- Conducted a day long hands-on workshop on Google Apps Script for Google Developer Groups Bangalore.
- [\[Link to Slides\]](#)

The Power of Google Apps Script

Bangalore, India

SPEAKER FOR GDG BANGALORE'S DEVFEST

Oct. 2017

- Introduced Google Apps Script with use cases, workflows and demos at Google Developer Groups Bangalore's annual developer conference.
- [\[Link to Slides\]](#)

Extracurricular Activities

Two Day Hands on Workshop on UML Modelling and Design Patterns

Bangalore, India

TEACHING ASSISTANT

Mar. 2017

- Conducted hands-on sessions on MVC using Flask at Global Academy of Technology, Bangalore.
- Wrote problem sets, walkthroughs, slides & lecture notes for the hands on sessions.
- Setup a cloud based IDE for students to use on c9.io to reduce setup time.

Google India's Code to Learn Contest 2016

Bangalore, India

JUDGE

May 2016

- Evaluated projects submitted by students of classes 5 to 10, created using Scratch and MIT App Inventor.

IEEE ANTS Conference 2016

Bangalore, India

CONFERENCE VOLUNTEER AND APP DEVELOPER

Nov. 2016

- Developed an Android & Web App to handle conference logistics using QR Codes on attendee badges.
- Helped organize the conference as a student volunteer at the Indian Institute of Science, Bangalore.

IEEE WIE Symposium 2016, Ignite Tech Fest 2016, TEDx MSRIT 2015

Bangalore, India

EVENT VOLUNTEER

2015-2016

- Organized, and conducted a Capture the Flag competition as part of Ignite Tech Fest 2016 at RIT.
- Helped organize events as a volunteer for TEDx MSRIT 2015 & IEEE WIE Symposium 2016 at RIT.