Sreekar Chigurupati

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Technical skills

- **Languages & frameworks:** Java, C++, Python, React
- **Training received:** Agile, AWS, Spring Boot, PCF, MERN Stack
- **Miscellaneous:** AWS, Basic ML & Computer Vision

Work Experience

Microsoft IDC — **Hyderabad**
Software Developer Intern — *June 2015–August 2015*

- Developed a wellness awareness app for the "Digital India" initiative
- Used Expression Blend to design wireframes
- Contributed to the cross-platform front end design
- Integrated Natural Language search API across varied datasets
- Worked with SQL Azure, Transact SQL and ASP.NET Web API

WeMakeScholars Inc. — **Hyderabad**
Web Developer — *July 2015–January 2016*

- Developed a visually pleasing PHP based website for a forum on student scholarships
- Optimized backend code to increase response times by up to 55% for domain specific phrase search

ETHNUS Technologies — **Bengaluru**
Software Developer Intern — *April 2016–July 2016*

- Created and tested a framework supporting operations for a video call service
- Worked on key-value store Redis to store metadata for objects stored on AWS
- Created a multi-platform frontend using Ionic JS
- Configured Docker containers to run compiler workloads for a collaborative code editor with high availability and crash protection

Reflexis Systems — **Pune**
Full Stack Developer Intern — *January 2018–June 2018*

- Worked on a web application that streamlines retail product strategy testing
- Built real-time dashboards for demographic based sales data using React, Spring Boot and MongoDB
- Built comparative line chart visualizations for A/B testing experiments using D3.js

Telstra — **Hyderabad**
IT Developer — *July 2018–Present*

- Working on a web application for monitoring engineering metrics across development centers
- Built analytic and reporting tools using React, Node, Sequelize and PCF
- Underwent training in AWS, Agile, Pivotal cloud foundry, Spring and MERN stack

Undergraduate Projects

- **Bi-directional Structured Output Tracking:** *'Under the guidance of Mr. Abhishek Thakur*

  Modified "Struck" algorithm to run bi-directionally to improve performance of object tracking over large temporal frames.
  - Implemented adaptive offline tracking-by-detection combined with robustness of SVMs to noise
  - Implemented Multiple instance learning to create a discriminative learning model
  - Worked with Larank and other kernel methods
  - Utilized OpenCV and Eigen to implement changes in bgs model

- **Vehicular Density Calculation:** *'Under the guidance of Dr.Aruna Malapati'*

  Devised an algorithm to track vehicular density and ease traffic decisions by extracting a time series data through processing of H264 videos obtained from IP cameras placed throughout the city. Done in collaboration with the Cyberabad Traffic Police.
  - Used object detection to create time series congestion models
  - Devised an algorithm to detect lane violation

- **Live Migration of Virtual Machines:***'Under the guidance of Mr. Abhishek Thakur'*

  Orchestrated a live migration by utilizing xen environment.
  - Implemented network migration of running virtual machines using POSTCOPY on linux VMs
  - Benchmarked POSTCOPY Vs. traditional migration to check real time performance
  - Programmed compatibility function to emulate flags like EPT to prevent migration failure

- **Raga Similarity Detection:** *'Under the guidance of Dr.Aruna Malapati'*

  Utilized Mel frequency cepstrum coefficients and other frame level audio features to calculate confidence scores for raga similarity of songs in a corpus.
  - Implemented single exponential smoothing for ragas
  - Analyzed music to capture note progression that represents a raga
  - Comparative statistical structure analysis of ragas to determine psycho acoustics

- **NDVI & Climate change correlation:** *'Under the guidance of Dr.Rajitha Kanjirappuzha'*

  Worked on innovative computer vision methodologies applied to satellite imagery for correlating climate change with vegetation decline
  - Created Machine Learning models to identify land swathes in hyperspectral images
  - Created Vegetation models to predict correlation of NDVI indices and climate change

Relevant Courses taken

- **Computer Programming**
  Gained practical exposure to C programming. Studied and implemented basic programming constructs.
- **Data Storage Tech. & Networks**
  Gained understanding of the working of storage networks and data centre operation. Worked with Software defined storage tool "CoprHD". Implemented Live Migration.
- **Information Retrieval**
  Studied the theory, design, and implementation of text-based information systems. Implemented a blog search engine based on vector space models. Implemented a collaborative recommendation system using Singular vector decomposition and CUR. Learnt about statistical language translation and multimedia information retrieval.
- **Object Oriented Programming**
  Gained hands-on experience in the object oriented methodology for programming, JAVA Programming. Obtained basic knowledge on notations in UML.

Non-university Courses

- **Google Machine learning crash course**
  Attended an ML crash course conducted at Google Hyderabad as part of the pilot program to shape ML self learning using Tensorflow
- **CSA Summer School**
  The Department of Computer Science and Automation (CSA), Indian Institute of Science (IISc), Bengaluru held a five and a half day summer school during July 2-7, 2018. The summer school contained talks, demos, and hands-on sessions by the institute faculty, research scholars and industry experts covering theoretical and applied aspects of computer science.