

# Sreekar Chigurupati

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## Technical skills

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- **Languages & Frameworks:** Java, C++, Python, Javascript, React.js, Elasticsearch, Spark
- **Miscellaneous:** AWS, Basic ML & Computer Vision
- **Technical Trainings :** Agile, AWS, Spring Boot, PCF

## Work Experience

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- **Telstra** **Hyderabad**  
*Software Engineer* *July 2018–Present*
  - Developed a petabyte scale data warehousing and insights platform to effect end to end order visibility spanning multiple services
  - Developed reporting and visualization pipelines on Elasticsearch and Kibana
  - Developed a dashboard application for monitoring engineering metrics across development centers with inbuilt RBAC
  - Developed a fullstack application with a GraphQL backend for maintaining organisation wide objectives and key results with a dependency management system
  - Gained extensive familiarity with a technology stack consisting of React, Node, GraphQL, PCF and AWS
  - Have built complete CI/CD pipelines using Bitbucket, Bamboo and PCF
  - Architected a university connect program with an industry led elective course to upskill students on modern enterprise development methods
  - Played a key role in the fruition of a maker space / innovation floor that facilitates employees to work on emerging technologies
  - Placed first in a international organisation wide Hackathon by solving employee engagement issues related to internal movement and skill matching
  - Placed first in a international cross-organisation Hackathon by reducing broadband customer transition cycle time by 25%
  - Conferred with the "Dream team of the year" award
  - Underwent training in AWS, Agile, Pivotal cloud foundry, Spring, MERN stack and Netflix OSS
- **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
- **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

- **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
- **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

## Education

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- **B.E(Hons) Electronics and Communication Engineering**  
*Birla Institute of Technology and Science, Pilani* *2014–2018*
  - CGPA: 6.85

## Undergraduate Projects

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- **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

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- **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 tools like "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.

## Awards & recognition

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- **Runner up, SEC India Hackathon**  
Placed 2<sup>nd</sup> in a hackathon event across Telstra India for designing a proof-of-concept tool that eases the process of conducting agile standup meetings.
- **Best innovation award, ETHNUS**  
Placed 1<sup>st</sup> in "innovation days" for interns at ETHNUS to rapidly develop a prototype that facilitates remote interviews in any way. Developed a collaborative code editor with syntax highlighting and sandboxed online execution environment.
- **Winner, ICC Hackathon**  
Placed 1<sup>st</sup> in a hackathon event across Telstra International for designing a tool to match skill sets to internal job postings and increase productivity and employee engagement.
- **Winner, Telstra Innovation Hackathon 2019**  
Placed 1<sup>st</sup> in a hackathon event across Telstra and its partners for designing an approach that reduces broadband transition cycle time by 25%.
- **Dream team of the year**  
Conferred the "Dream team of the year" award for building innovative prototypes that helped the business scale OKR approach rapidly.