

# Jeess Augustine

. ALGORITHM . DATABASE . DATA SCIENCE . DEEP LEARNING . GRAPHS . MACHINE LEARNING .

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## EDUCATION

**Ph.D. Computer Science and Engineering**  
University of Texas at Arlington, USA  
(CGPA: 4.0/4.0)

Arlington, Texas  
2014 -PRESENT

**Master in Engineering . Computer Science and Engineering**  
Birla Institute of Technology & Science, Pilani, India  
(CGPA: 8.19/10.0)

Pilani, India  
Fall 2011- Fall 2013

## PROFESSIONAL EXPERIENCE

### Cisco Systems - India

SOFTWARE ENGINEER II

Bangalore, India  
Aug-2013 – Aug-2014

- Implementation and refinement of features in **Multi-Protocol Label Switching (MPLS)** and **Fast Rerouting (FRR)** on mobile backhaul networks.

### EMC Corporation

PROJECT INTERN

Bangalore, India  
Jan-2013 – Jun-2013

- Design and development of an application, choreographing the Backup Server Install/Upgrades in **Python**.
- Devising a **pseudorandom number generator** for verifying the client-side deduplication.

### Indian Institute of Technology - Chennai

PROJECT INTERN

Chennai, India  
May-2012 – Jul-2012

- **Online Minimum Makespan Scheduling** with improved Buffer Size.

### Vikram Sarabhai Space Center (VSSC)

PROJECT INTERN

Trivandrum, Kerala  
Nov-2009 – Jan-2009

- **Design of information warehousing** system for launch vehicle simulations using **JSP** and **MySQL**.

## SKILLS

Data Analysis	<b>Pandas, NumPy, SciPy</b>
Machine Learning	<b>SciKit-Learn</b>
Deep Learning	<b>Keras, TensorFlow</b>
Visualization	<b>Matplotlib, Tableau(beginner)</b>
Languages	<b>Python, C, Java, HTML, JSP</b>
Databases	<b>MS Access, MS SQL Server, MySQL, Oracle</b>
Web Technologies	<b>HTML, XML, CSS, JavaScript</b>
Query Languages	<b>SQL, PLSQL</b>

## PUBLICATIONS

- Abolfazl Asudeh, Azade Nazi, **Jeess Augustine**, Saravanan Thirumuruganathan, Nan Zhang, Gautam Das, Divesh Srivastava. “**Leveraging Similarity Joins for Signal Reconstruction**”. *Accepted VLDB: Very Large Databases 2018*.
- [Poster] Abolfazl Asudeh, Azade Nazi, Saravanan Thirumuruganathan, **Jeess Augustine**, Sona Hasani, Nan Zhang, Gautam Das, Divesh Srivastava. “**Finding the Closest Point to a Prior in Large-Scale Sparse Binary Under-Determined Systems**”, In *iPerform 2017*.
- [Poster] Azade Nazi, **Jeess Augustine**, Saravanan Thirumuruganathan, Gautam Das, Divesh Srivastava, Nan Zhang. “**Finding Top-k Source-Destination Flows in a Network**”. In *iPerform 2016*.

## WORKING PROJECTS

- AEL: **Deep Learning Models** to Predict User’s Spatial Locations Using GPS Data
- Computing **Top-K Nearest Neighbor Graph** through Crowdsourcing

## RELEVANT COURSES

**Advanced Computational Models and Algorithms** . Special Topics in Advanced Information Security . **Machine Learning** . **Advanced Algorithms and Complexity** . Advanced Computer Networks . Advanced Operating Systems . **Algorithm Analysis and Design** . Security in Computing . **Data Analysis and Modeling** . **Reasoning with Uncertainty** .

## CERTIFIED COURSES ONLINE - MOOC

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- Coursera **Introduction to Data Science in Python** -Link-
- Coursera **Programming for Everybody, Getting Started with Python** -Link-
- Coursera **Python Data Structures** -Link-
- Coursera **Using Python to Access the Web Data** -Link-
- Coursera **Using Databases with Python** -Link-

## ONGOING COURSES ONLINE - MOOC

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- Coursera **Deeplearning.Ai**
- Coursera **Machine Learning**
- Coursera **Neural Networks for Machine Learning**
- Udacity **Deep Learning from Google**
- edx **Machine Learning for Data Science**

## RESEARCH EXPERIENCE

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- **AT&T Research Grant, DBXLab** University of Texas at Arlington Spring 2017
- **Qatar Research Foundation Grant, DBXLab** University of Texas at Arlington Spring 2018

## PROJECTS

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1. **Face Recognition using Support Vector Machines (SVM)** UTA, Sep 2014 – Dec 2014  
**Technology** Python2.7, NumPy, SciPy  
**Dataset** AT&T Image Dataset (40 different individuals)  
**Methodology** **Principal Component Analysis** for dimensionality reduction, **SVM** for classification  
**Accuracy** 88% in Testing
2. **Image Recognition using Linear Discriminant Analysis (LDA)** UTA, Sep 2014 – Dec 2014  
**Technology** Python2.7, NumPy, SciPy  
**Dataset** AT&T Image Dataset (40 different individuals)  
**Methodology** **Principal Component Analysis** for dimensionality reduction, LDA for classification  
**Accuracy** 94% in Testing
3. **Choreography of Backup Server Install/Upgrade** EMC-Corporation, Bangalore: Jan 2013 – Jun 2013  
**Technology** Python2.7, Linux, EMC Avamar, MySQL  
**Dataset** Proprietary, EMC corporation  
**Methodology** **Choreograph the Software Upgrade**, Generate **Pseudo Number** from Linux to test, Validation and Sanity Check  
**Deployment** for Internal Use at EM Corporation
4. **Live Migration of Virtual Machine over a Network** BITS, Pilani, Aug 2012 – Dec 2012  
**Technology** Java, Linux, MySQL, KVM  
**Dataset** Synthetic Dataset Generated  
**Methodology** Premature Negotiation, Push-Pull Negotiation with source and destination  
**Deployment** Experiential
5. **Middleware framework on the cloud enabling Semantic Dynamic Composition** BITS, Pilani, Jan 2012 – Dec 2012  
**Technology** Java, Linux, MySQL  
**Dataset** Synthetic Dataset Generated  
**Methodology** Sematic module identification with Natural Language, compose brand-new cloud services based on requirement  
**Deployment** Experiential
6. **Distributed System Simulator** BITS, Pilani, Sep 2011 – Dec 2011  
**Technology** Java, Linux  
**Dataset** Synthetic Dataset Generated  
**Methodology** **Deadlock Detection, Deadlock Prevention**, Process Synchronization, **IPC**  
**Deployment** Experiential
7. **Design of Information Repository System for Launch Vehicle** VSSC, ISRO, India Dec 2010 - Jan 2011  
**Technology** JSP, MySQL, Apache Server  
**Dataset** Proprietary flight data ISRO  
**Methodology** **Deadlock Detection, Deadlock Prevention**, Process Synchronization, **IPC**  
**Deployment** for Internal Use at VSSC, ISRO

## TEACHING and MENTORSHIP

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- **STEM Scholarship** for Graduate Teaching Assistant at long semesters at UTA. Fall 2014 – Current
- Graduate Teaching Assistant, **Secure Programming**, UTA. Fall 2017

- Graduate Teaching Assistant, **Advanced Topics in Database Systems**, UTA. Summer 2016
- Graduate Teaching Assistant, **Computer Networks**, UTA. Fall 2016, Spring 2016
- Graduate Teaching Assistant, **Computer Networks I: Protocols and Architecture**, UTA. Fall 2014 – spring 2015
- Teaching Assistant, **Data Structure and Algorithms**, Birla Institute of Technology and Science, India. Fall 2012
- Teaching Assistant, **Computer Networks**, Birla Institute of Technology and Science, India. Fall 2011 – Spring 2012

## ACADEMIC ACHIEVEMENTS

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- **1 among the 18 qualified** for BITSAT- Higher Degree Program (Computer Science), an **All India entrance examination** for admission into Master Degree by Birla Institute of Technology and Science, Pilani (BITS-Pilani), India.
- Secured **98.88 Percentile** in Graduate Aptitude Test in Engineering (**GATE**) in 2011 (**Written by .13M Students**).
- Project Forum Member (Masters) Computer Science Association BITS – Pilani.
- Secured **1<sup>st</sup> position** for presenting the paper “Self-Defending Networks-A Smarter Way to Defend” at **XTRIUM 09 v.20**, Technical Festival by Association of Electronics and Communication Engineering, MACE, Kothamangalam.
- Secured **2<sup>nd</sup> position** for presenting the paper “Self-Defending Networks with Automatic Intrusion Detection” at **Qbit’09 v.20**, Technical Festival organized by Department of Computer Science and Engineering, MACE, Kothamangalam.