

Shubham Saini

University of California, San Diego
s1saini@ucsd.edu
Phone: (425) 595-8427
<https://github.com/shubhamsaini>

OBJECTIVE Computer science graduate student seeking software development internship.

EDUCATION **University of California, San Diego** [Sept 2015 - Mar 2017]
Master of Science, Computer Science **GPA: 3.55/4.0**

Vellore Institute of Technology, India [Aug 2010 - June 2014]
Bachelor of Technology, Computer Science **GPA: 8.89/10**
Thesis: E-Adivino: A Novel Framework for Electricity Consumption Prediction based on Historical Trends

WORK EXPERIENCE **Energy Research Group, IIIT Delhi** (Adviser: Dr. Amarjeet Singh)
Associate July 2014 - August 2015
Undergraduate Researcher January 2014 - July 2014
Developed interactive dashboards, modeling and analysis of building energy and sensors data. Helped save at least 10% on electricity costs across various commercial buildings.
Technologies: Python (numPy, sciPy, Pandas, scikit-learn, matplotlib), R

Robert Bosch Centre for Cyber-Physical Systems, May 2013 - July 2013
Indian Institute of Science, Bangalore (Adviser: Dr. Ananthasuresh)
Intern
Developed an android application for interfacing a wearable jewelry to a smart phone.
Technologies: Android SDK (Java, XML)

TEACHING EXPERIENCE **Tutor** January 2016 - March 2016
Database Systems (CSE 132A) (Instructor: Dr. Victor Vianu)

Teaching Assistant July 2013 - December 2013
Database Systems (CSE 312) (Instructor: Dr. Rekha D.)

TECHNICAL SKILLS **Programming:** Python, Java, C++, R, Android, MATLAB
Web Development: PHP, HTML, XML, CSS

Databases: MySQL, Oracle

Certifications: 1. Yahoo! Summer School on Information Retrieval and Semantic Web
2. Oracle Certified Database Design and Programming with SQL

AWARDS

1. **Best Demo Award** at The 6th ACM International Conference on Future Energy Systems, e-Energy 2015, Bangalore, India.
2. **Student Travel Grant** for The 6th ACM International Conference on Future Energy Systems, e-Energy 2015, Bangalore, India.
3. Sponsored by Hanban for **Chinese Winter Camp** in Zhengzhou/Beijing in December 2012.

PROJECTS

1. Analytics Driven Operational Efficiency in HVAC Systems

Energy Research Group, IIIT Delhi

Adviser: Dr. Amarjeet Singh

Demonstrated the effectiveness of using data mining and analytics in identifying the energy saving potential from the HVAC system.

Published at: The 2nd ACM International Conference on Embedded Systems For Energy-Efficient Built Environments, BuildSys 2015.

Technologies: R, Simple Measurement and Actuation Profile (sMAP)

2. E-Adivino: A Novel Framework for Electricity Consumption Prediction based on Historical Trends

Energy Research Group, IIIT Delhi

Adviser: Dr. Amarjeet Singh

Proposed a multi-stage generalized forecasting framework making use of sophisticated statistical modeling.

Published at: The 6th ACM International Conference on Future Energy Systems, e-Energy 2015.

Technologies: R with Shiny (for web GUI), sMAP

3. Hybrid Feature Selection using WMK-Means and SVM-RFE

Vellore Institute of Technology

Adviser: Prof. I. S. Thaseen

Proposed a two step hybrid feature selection technique involving application of SVM-RFE on the results obtained from WMK-Means. The feature subset had lower FPR in network anomaly detection.

Published at: The 20th International Conference on Management of Data, CO-MAD 2014.

Technologies: Python (numPy, sciPy, Pandas, scikit-learn, matplotlib)

4. A Hybrid Anomaly Detection Model using G-LDA

Vellore Institute of Technology

Adviser: Prof. I. S. Thaseen

Proposed a hybrid technique integrating Latent Dirichlet Allocation and genetic algorithm. Experiments on NSL-KDD dataset showed an increased accuracy for detecting network attacks.

Published: 4th IEEE International Advance Computing Conference, IACC 2014.

Technologies: Java, MySQL

WHITE PAPERS

1. **Shubham Saini**, Amarjeet Singh, "Data Driven HVAC Optimization at IIIT Delhi" Zenatix Solutions India Pvt. Ltd. (December 2014).

GRADUATE COURSES

Probabilistic Reasoning and Learning, Database Systems, Data Mining and Predictive Analysis, Learning Algorithms, Algorithms in Computational Biology

EXTRA-CURRICULAR ACTIVITIES

Leadership: Co-Founder - GNU/Linux Users Group (GLUG) at VIT

Languages: English, Hindi, Punjabi, French, Mandarin Chinese

Musician: Saxophonist and Flautist.