Aditya Raj

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Education

- **Technische Universität Clausthal** — ClausthalZellerfeld, Germany
  Master of Internet Technologies and Information Systems; GPA: 1.2/5 — *Nov. 2015 – March. 2018*
- **Vellore Institute of Technology** — Vellore, India
  Bachelor of Engineering in Information Technology; GPA: 8.71/10.0 — *May. 2011 – April 2015*

Experience

- **Accenture Technologies GmbH** — Berlin, Germany
  Java Software Developer — *April 2018 - Present*
- **Salzgitter Flachstahl GmbH** — Salzgitter, Germany
  Masters Thesis Research Intern — *July 2017 – Jan 2018*
  - **Thesis Title**: Improving classification in machine learning using high dimensional outlier detection with an application to quality control in steel manufacturing
  - **Research work**: Developed Voting Outliers Using Randomized Sampling (VOTERS) algorithm to analyze defect patterns in long steel bars. The algorithm was implemented and tested in R and then finally integrated to a Gradle based JAVA platform to support automated extraction of outliers from XML files using JAXB, dimensionality reduction and unsupervised machine learning
- **Technische Universität Clausthal** — ClausthalZellerfeld, Germany
  Research and Student Assistant
  - **Student Assistant - WebDevelopment(Jan 2017 - July 2017)**: Developed website www.icln.de which allows registered members from different universities to participate in a team based role play for TOPSIM business simulation game. Other features include user profile management, viewing member details, role based file uploads, adobe communication and video playlists.
  - **Student Assistant - Data Analysis(Jan 2017 - April 2017)**: Assisted in completing the research paper on world energy balances by analyzing IEA energy database and producing relevant charts and graphs for different energy sources based on production, region, sector, demand, and trade.
  - **Student Assistant - Java Simulations(Oct 2015 - Aug 2016)**: Created models of OpenStreetMap data using Blenders, Osm2World and Osm2Filter. The process was further automated by developing an OpenStreetMap Query Filter tool based on JAVA MAVEN framework using suitable XSD and XSLT transformations of OSM data.

Projects

- **CLAP *(Nov 2016 - April 2017)***: Cooperative Locality-aware Data Processing in Heterogeneous Wireless Sensor Networks project: Simulated network of Telosb motes and Raspberry Pi devices with the focus on increasing energy budget of the sensor network by pulling away the load of large amount of data processing locally and instead shifting the workload to aggregator processing centre with higher compute power and energy budget. This work was further published at *Fachgesprch Fog Computing* conference.
- **Image Recognition *(For two months)***: Modelled a Convolution Neural Network for recognizing images.
  Problem: https://www.kaggle.com/c/dogs-vs-cats
- **Agent-based simulation of autonomous cars *(Dec 2014 - May 2015)***:
  B.Sc. Thesis; *GPA: 10/10 (where 10 being best out of 10)* — ClausthalZellerfeld, Germany
  Planning vehicle maneuvers using maneuver libraries and neighboring vehicle cooperation. Simulated maneuvers of several cars in JAVA using the joint platform of Open Driving Simulator and AgentDrive.
- **Robotic Firefighters *(For two months)***: Developed information and decision models for teams of autonomous robots equipped with sensors, manipulators and communication for entering disastrous scenarios. The model was simulated on V-REP platform using LUA programming language.

Skills

Programming Languages: JAVA, R, Python, Javascript, C++, SQL
Web Programming: HTML5, CSS, XSLT, XSD, Bootstrap, PHP, React
Programming Tools: Git, CircleCI, Maven, Gradle, Java 8 API, Spring, Hibernate, JDBC, JPA, Renjin
Speaking: English - *Fluent*, German - *Basic(until A2)*