Aditya Raj

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Education

- **Technische Universität Clausthal** — ClausthalZellerfeld, Germany
  Master of Internet Technologies and Information Systems; GPA: 1.4/5 — *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

- **MicroDoc GmbH** — Berlin, Germany
  Software Developer — *April 2019 - Present*
  - **Role**: Working in an agile team to provide APIs for web and mobile app development for Sparkasse bank. This involves extensive use of Java and Kotlin based front end development and providing APIs for several UI Components based on Spring Thymeleaf and Kotlin.
- **Accenture Technologies GmbH** — Berlin, Germany
  Java Software Developer — *April 2018 - March 2019*
  - **Role**: Worked in an agile team to enhance and support the web portal of Volkwagen. The work involves Java based backend and Struts based frontend develpment of the web portal.
- **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

- **iOS and Android Application Development***(April 2019 - Dec 2019)*: As a front-end developer in an agile team, the project aimed to provide APIs for developing mobile application based n customised UI components using NativeScript. The work also involved providing a mobile application (suitable for both iOS and Android) demonstrating functionality of each of the UI components.
- **VW Dealer Portal Maintenance***(June 2018 - March 2019)*: As a JAVA EE developer in a Scrum team, the daily task is to continuously improve VW web portal. The portal is founded on STRUTS framework and utilises technologies such as Hystrix, SOAP, MySQL and others. Hence the nature of daily assignment includes maintenance and continuous fetaure integration to the portal using diverse technologies.
- **PrintService***(Sep 2018 - Nov 2018)*: Dynamic generation of XSL script based for automated XSL:FO transformation after analyzing hundreds of thousands of XMLs in JAVA.

- **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 *Fachgespräch Fog Computing* conference.
- **Image Recognition** *(For two months)*: Implemented Convolutional NN for recognizing images using TensorFlow. 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 vehicles 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, Kotlin
Web Programming: HTML5, CSS, XSLT, XSD, Bootstrap, PHP, React, Nativescript
Programming Fameworks/Tools: Git, CircleCI, Maven, Gradle, Java 8 API, JAVA EE, Spring, Spring Thymeleaf, Hibernate, JDBC, JPA, Renjin, struts
Speaking: English - *Fluent*, German - *Basic(until B1)*