(+49)17644481787 **ANUPMA RAJ** anupmaraj@gmail.com

WORK EXPERIENCE

Associate Software Developer **SAP (Headquarters, Germany)** **1 Nov 2016 – Present**

HANA Cloud Platform Metering and Reporting; Java, Javascript; PaaS Layer of Cloud

- Early member of the new Metering and Reporting Team for the entire SAP HANA Cloud Platform.
- Backend development: metering usage of cloud resources and frontend development: displaying results in the Cloud Cockpit.
- Processing metering data in Cloud Reporting with the aim of generating payment plans for HCP.

Master's Thesis **SAP & Technical University of Darmstadt (Germany)** **Mar 2016 – Sept 2016**

Extending Web Analytics with prediction models to detect anomalies in distributed web applications; R, Java; SaaS Layer of Cloud

- Literature review on types of Web Analytics Software, Predictive algorithms for time series data, anomaly detection methods.
- Implementation of Holt-Winter's Algorithm to predict future trends in the web analytics context.
- Comparison of resulting predictions with actual data to identify anomalous situations through Chebyshev's Inequality.
- Setting thresholds that identify different severities of anomalies and consequently trigger three alerts- Low, Medium and High.

Student Cloud Developer **SAP (Darmstadt, Germany)** **July 2015 – Feb 2016**

SAP Web Analytics; Java; PaaS Layer of Cloud

- Implementing and testing Data Reports for analyzing data collected through SAP Web Analytics.

Software Engineer, Intern **Axel Springer (Germany)** **Sep 2014 – Mar 2015**

Designing and Implementing an Auto-Scaler for Cloud Foundry; Go; PaaS Layer of Cloud

- Independently wrote an Application level Auto-Scaler for Cloud Foundry's Pivotal to automate the manual scaling process.
- Implemented threshold limits for 'Requests per second' metric.
- Accounted for inertia periods and instance startup and shutdown waiting periods.

Bachelor's Thesis **National Institute of Technology, Karnataka (India)** **Aug 2012 – Apr 2013**

Modified DCTCP Algorithm for Data Center Congestion Notification; C; IaaS layer of Cloud

- Implemented an improved Data Center Transmission Control Protocol algorithm with two modifications in C entitled iDCTCP: implementing the Mark from Head Strategy, and eDCTCP: implementing the Binary Increase Strategy.
- iDCTCP and eDCTCP provide significant improvement over the performance of the DCTCP in data centers by improving throughput for elephant traffic and decreasing latency for mice traffic.
- Solved the problems of incast, queue build-up and buffer pressure at the switch in data centers.

Software Engineer, Intern **Indian Institute of Management, Ahmedabad (India)** **Jun 2011 – Aug 2011**

Customer Churn in the Telecommunication Industry through Data Mining

- Identified features that influence customer churn through literature surveys.
- Designed a questionnaire to collect feature - relevant data from over 300 respondents.
- Analyzed it to define relationships between influential factors using SPSS Statistics and determine churn pivots.

EDUCATION

Darmstadt, Germany **Technical University of Darmstadt** **Sept 2013 – Sept 2016**

M.Sc. in Distributed Software Systems

- Graduate Coursework: Distributed Systems, Resilient Networks, Network Security, Middleware, Event Processing, Communication Networks, Software Engineering

Karnataka, India **National Institute of Technology Karnataka** **July 2008 - July 2012**

B.Tech. in Computer Science Engineering

- Undergraduate Coursework: Distributed Computing Networks, Cloud Computing, Advanced Comp. Networks, Data Structures and Algorithms, Operating Systems, Information Security, Artificial Intelligence, Software Engineering, System Programming

Geneva, Switzerland **International School of Geneva** **July 2005 - May 2008**

- International Baccalaureate Diploma in Math, Physics, Chemistry, Biology, English, French

ADDITIONAL INFORMATION

Programming Languages / Cloud Platforms / Operating Systems / Web Technologies

- Java; Go; C / SAP HANA; Cloud Foundry; / Mac; Linux; Windows / HTML; CSS; Bootstrap; SAPUI5; JSON; XML

Publications

- iDCTCP: Improved DCTCP with Mark from Head Strategy for Data Center Networks [2013]

Certifications

- TOEFL, Jan 2013: Total- 117/120. Reading- 30/30. Writing- 27/30. Listening- 30/30. Speaking- 30/30.
- GRE, Nov 2012: Total- 324/340. Quantitative Reasoning- 165/170. Verbal Reasoning- 159/170.

Languages

- English (Mother Tongue); Hindi (Mother Tongue); German (B1 Certificate); French (intermediate)