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SUMMARY & INTERESTS:	<b>3+ years of Industry and Graduate Research experience</b> Distributed Systems, Cloud Engineering, Data Science, Statistical Modelling, Machine Learning, Computer Vision, AR/VR, Web Development, Mobile Development, User Interfaces and API development	
EDUCATION:	<b>M.S in Computer Science, University of Oregon ( June 2017 )</b> <i>Relevant Coursework:</i> Algorithms and Complexity, Advance Data Structures, Big Data and Data Science, AI, Probabilistic Methods in AI, Parallel Computing, Distributed Systems, Software Engineering and User Interfaces <b>B.E Information Technology, University of Pune, India ( May 2013 )</b>	
TECHNICAL SKILLS:	<b>Programming and Scripting Languages:</b> Python, C, C++, C#, Java, JavaScript, SQL, MATLAB, R, OCaml, Bash <b>Libraries, Frameworks and Development Platforms:</b> ReactJS, NodeJS, Express, REST API, Weka, Unity, Docker Sci-kit learn, SciPy, NumPy, Pandas, MPI, OpenMp, TBB, Cilk, Android Studio, Hadoop, Arduino	
PROFESSIONAL EXPERIENCE:	<b>Graduate Research Fellow, HPCL, University of Oregon</b> July 2016 – June 2017 <ul style="list-style-type: none"><li>• Worked as a research member, at the High-Performance Computing Lab (HPCL), on a project funded by the Department of Energy(DoE) to auto-tune performance of simulation of large-scale scientific experiments.</li><li>• Used Python and Shell scripting for tracing and sampling data from experiments conducted on Edison-NERSC supercomputer and used Machine Learning techniques to improve performance and speed-up by 4x</li></ul> <b>Graduate Teaching Fellow, University of Oregon</b> Dec 2015 – June 2016 <ul style="list-style-type: none"><li>• Lab Instructor for Introduction to Web Programming - Taught HTML/CSS and JavaScript</li><li>• Lab Instructor for Hands on with Internet of Things - Taught Python programming with Raspberry Pi</li></ul> <b>Software Engineer, Accenture, India</b> Oct 2013 – Dec 2014 <ul style="list-style-type: none"><li>• Performed analysis, code changes and testing in ABAP programming to correct functionality and usability issues related to the system. Successfully resolved over 50 critical system related issues affecting the client's business</li></ul> <b>Computer Vision Intern, Aeron Systems, India</b> Dec 2012 – June 2013 <ul style="list-style-type: none"><li>• <b>Emotion Based Music Player</b> – Developed an application in MATLAB that utilizes real-time emotion recognition to play music depending on the facial expression displayed by the user</li></ul>	
PROJECTS:	<b>Server API development in Node.js</b> [ <a href="https://github.com/rajan3012/CCAS">https://github.com/rajan3012/CCAS</a> ] <ul style="list-style-type: none"><li>• Created three servers using <b>Node.js</b> and <b>MongoDB</b>, and their <b>REST</b> APIs to establish car intermediary and supplier interactions, and allow customers to place orders with the intermediary. Stepwise tutorial on github link.</li><li>• Used <b>Mongoose</b>, <b>Express</b>, <b>Nodemon</b>, <b>Lodash</b>, <b>Axios</b> for development and <b>Mocha + Chai</b> for testing</li></ul> <b>Internet of Things – Cluster controlled autonomous vehicles</b> <ul style="list-style-type: none"><li>• Developed an IoT system that allows Arduino based Ringo robots to work in communication with a central server (<b>MQTT</b>). Used Ricart-Agrawala and Supervisor-worker algorithms to develop the system</li><li>• Developed using <b>Python</b>, Raspberry Pis to form the cluster and <b>Arduino</b> for robot programming to simulate autonomous vehicles</li></ul> <b>AR Android app - Virtual Buttons</b> <ul style="list-style-type: none"><li>• Developed an Android application using <b>C#</b>, <b>Unity</b> and <b>Vuforia</b> to create Virtual Buttons to interact in an Augmented-Reality (AR) setting (download here: <a href="https://github.com/rajan3012/Virtual-Buttons-in-AR">https://github.com/rajan3012/Virtual-Buttons-in-AR</a>)</li></ul> <b>YouTube Data Analyzer using Hadoop</b> <ul style="list-style-type: none"><li>• Developed a Big Data analyzer for YouTube videos using <b>Hadoop MapReduce</b> to obtain top viewed and top categories from around 4,000,000 records in under 10 seconds</li></ul> <b>Compiler Development</b> <ul style="list-style-type: none"><li>• Built a compiler from scratch in <b>C++</b> to translate from Quack, an object oriented strongly types language, to C</li><li>• Developed a type checker for contra/covariance, recursion support, control flow with short circuit evaluation, and full polymorphism including dynamic dispatch mimicking C++ Virtual Method Tables. <b>LLVM</b> for code generation</li></ul> <b>Face recognition using PCA, SVM and SOM</b> <ul style="list-style-type: none"><li>• Developed a <b>MATLAB</b> project to compare performance of Principal Component Analysis(PCA), Support Vector Machine(SVM) and Self-Organizing Map(SOM) for face recognition</li></ul>	