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Aditya Kumar

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Education

College Station, TX **Texas A&M University** **August 2018 – May 2020**

- Master of Science in Computer Science. **GPA: 4.0/4.0**
- Major Coursework: Artificial Intelligence; Machine Learning; Neural Networks; Cloud Computing
- Graduate Assistant (GA) in the Department of Information Technology, Division of Student Affairs

Calicut, India **National Institute of Technology** **July 2012 – May 2016**

- Bachelor of Technology in Computer Science and Engineering. **GPA: 9.37/10.0**

Languages and Technologies

- C++ (Proficient), Java (Prior Experience), C, Python, MySQL, Shell Scripting, PHP, HTML, CSS
- Git, GitHub, GNU Debugger, Lex, Yacc, Laravel, Rational ClearCase, JavaScript, jQuery

Experience

Software Engineer, R&D **Sandvine Technologies** **June 2016 – July 2018**

- Automated parameter calibration in fuzzy control system by developing service using C++ capable of monitoring network traffic over **100,000 locations**.
- Designed REST APIs for traffic shapers in C++ enabling dynamic policy enforcements without system reloads. This saves **9 hours** (average) of maintenance time per month.
- Developed hash map and timers based internet traffic classification mechanism in C++ improving identification of applications that rely on third-party services by **90%** (on average).
- Improved system reloads time by **10%** using efficient data structures like maps/sets and removing file-based configuration reads. (C++)

Software Development Intern **InApp Inc.** **May 2015 - July 2015**

- **Recruitment Application:** Led a 3-member team and engineered a recruitment web application in PHP using MVC architecture capable of handling every step involved in the hiring process.

Projects

- **Deep Person Re-Identification:** Developed a deep neural Re-Id model and made it robust to occlusion using Random Erasing, a data augmentation technique, and reduced the influence of pose variations by using Pose normalized Generative Adversarial Network(GAN). Python, PyTorch
- **Sentiment analysis (ML):** Natural language processing (NLP) project to classify reviews as positive or negative using Multinomial Naive Bayes Classifier in Python.
- **Sandvine Genie (Hackathon Winner):** Developed voice controlled system capable of detecting/reporting unusual internet traffic trend based on probe results. PHP, "api.ai"
- **Kernel based simulation study of RSDM-A:** Enhanced memory management unit of Xen hypervisor by adding in-memory table to prevent rollback attacks and published the research in IEEE ISCBD 2107. C, C++
- **eXperimental Operating System (XOS):** Designed OS and implemented important interrupt routines, scheduling algorithm and system calls.

Additional Information

- **Work Authorization:** Eligible to intern in the US for 12 months under CPT
- **Leadership:** Treasurer(August 2018 – Present), Computer Science Graduate Student Association(CSEGSA)
- **MOOCs:** Neural Networks and Deep Learning by deeplearning.ai; Structuring Machine Learning Projects by deeplearning.ai; Machine Learning by Stanford University on Coursera; Design Patterns on Udemy