Palash **Chauhan**

(+1)858-729-8701 | palashc983@gmail.com | palashc.github.io | palashc | pc0

Education

University of California, San Diego, MS in Computer Science	2019 - 2021	*San Diego, CA*
Indian Institute of Technology, Kanpur, B.Tech in Computer Science and Engineering	2013 - 2017	*Kanpur, India*

Technical Skills

Languages	Python, Java, C, C++, Scala, Go
Machine Learning	Tensorflow, Keras, PyTorch, scikit-learn, OpenCV
Data Systems	Hadoop, Kafka, Spark, Druid, Presto
Web	HTML, CSS, AngularJS, Spring MVC
Others	MySQL, PostgreSQL, Docker, Prometheus, Grafana, Graphite

Work Experience

Adobe   *Bengaluru, India*

ADOBE MEDIA OPTIMIZER, MEMBER OF TECHNICAL STAFF   *Jul 2017 - Aug 2019*

- Built a streaming architecture spanning multiple geographically distributed edge-servers using Kafka and the Adobe Experience Platform
- Using Prometheus and Grafana, built a monitoring system to keep track of data inflow and outflow at every component of the architecture
- The architecture could reduce the latency in cross-device search attribution by 10x compared to the existing batch processing framework
- Created a data pipeline for search advertising keywords performance data using Postgres, Hadoop and Presto as the SQL Engine
- Performed benchmarking of the proposed data pipeline (and alternatives like Druid) using the expected query workloads.
- Extended the AMO back-end framework for high volume and time sensitive data synchronization with the Pinterest Ad Platform

Adobe BigData Experience Lab   *Bengaluru, India*

RESEARCH INTERN   *May 2016 - Jul 2016*

- Analyzed topical behaviour of users interacting with Adobe applications like Photoshop and Illustrator
- Modelled user data using topic models like Latent Dirichlet Allocation using a document-words analogy for user sessions
- Used extracted topics and user workflow data to build a topic transition model assuming a First Order Markov Chain
- Built a recommendation system based on the topic transition model to surface contextual guidance to the user within the app
- Integrated the recommendation system within Adobe Illustrator and presented a live demo. Adobe has patented the entire research.

Monet Networks   *Gurgaon, India*

SOFTWARE DEVELOPMENT INTERN   *May 2015 - Jul 2015*

- Developed new engagement metrics for non verbal cues analytics and integrated them with Monet's platform.
- Implemented a Collaborative Filtering based video recommendation system within Monet's platform to improve user experience
- Enhanced Monet's non-verbal cues analytics platform using web development in PHP, MySQL and JavaScript

Key Projects

Malware Detection using Neural Networks   *National University of Singapore*

SINGAPORE CYBER SECURITY R&D CONFERENCE | ⬚   *Feb 2017*

- Experimented with various deep learning architectures like LSTMs, CNNs and Auto Encoders to detect malware in executable binaries
- Project won 3rd prize at a hackathon conducted by 2nd Singapore Cybersecurity R&D Conference at NUS

Load Value Prediction   *IIT Kanpur*

COURSE PROJECT FOR COMPUTER ARCHITECTURE | ⬚   *Jan 2017 - Apr 2017*

- Analyzed SPEC CPU2006 benchmarks using PIN tool for the presence of Value Locality within instructions using different history depths
- Built a Load Value Prediction Unit to enable instruction-level parallelism and analyzed its performance on the SPEC2006 benchmarks

Automatic Abstract Generation for Research Papers   *IIT Kanpur*

COURSE PROJECT FOR NATURAL LANUAGE PROCESSING | ⬚   *Aug 2016 - Nov 2016*

- Used a combination of Extractive and Abstractive summarization to generate summaries for long documents like research papers
- Used Topic Models, TextRank and Latent Semantic Analysis to extract important sentences which were fed into an RNN encoder-decoder
- The model was trained on a dataset of NIPS research papers and evaluated using the ROUGE metric

CNN for Non-Maximum Suppression in Dense Image Captioning   *IIT Kanpur*

COURSE PROJECT FOR ADVANCED COMPUTER VISION | ⬚   *Aug 2016 - Nov 2016*

- Experimented with the parametric design choices of DenseCap, a Fully Convolutional Localization Network for dense image captioning
- Integrated a Tyrolean Network, a CNN for Non-Maximal Suppression, into DenseCap to increase its mean average precision

Patents

Application Tool Recommendation   *USPTO*

PALASH CHAUHAN, 2018, U.S. PATENT 20180260718, FILED MAR 2017, AND ISSUED SEP 2018   *Sep 2018*

- Proposed Topic Models for user click-stream data in applications like Adobe Photoshop to provide contextual guidance to new users