

Palash Chauhan

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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 LANGUAGE 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