Abinesh Ramakrishnan

CONTACT
INFORMATION

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EDUCATION

University of California, Irvine

Ph.D. in Electrical Engineering and Computer Science   *Jan 2011 – Mar 2015*

M.S. in Electrical Engineering and Computer Science   *Sept 2008 – Dec 2010*

Madras Institute of Technology, Anna University, Chennai, India

B.E. in Electronics and Communication Engineering   *Aug 2004 – May 2008*

PROFESSIONAL
DEVELOPMENT

Machine Learning by Stanford University on Coursera   *Aug 2017*

Completed the course additionally in Python. Code on Github.

Deep Learning Specialization by deeplearning.ai on Coursera   *Sep 2017*

PROFESSIONAL
EXPERIENCE

Huawei (Futurewei Technologies), Santa Clara, CA

Research Engineer   *May 2015 - Sep 2016*

Adaptive Video Streaming over CCN with Network Coding for Seamless Mobility.

- Implemented Network Coding functionality in CCNx (in C).
- Demonstrated bandwidth aggregation across multiple paths and eliminated lags during hand-offs between access points allowing seamless mobility.

C4 for DASH: Coordinated Content Coding using Caches for Adaptive Video Streaming.

- Designed and developed an architecture for using coded caching for Dynamic Adaptive Streaming over HTTP (DASH)
- Built a proof-of-concept system (using Python) implement this architecture and demonstrated a bandwidth saving of up to 50%.

Research Intern   *Sep 2013 - Dec 2013*

- Designed an innovative algorithm for delivering content in Coded Caching framework.
- Demonstrated an improvement of upto 30% reduction in expected load for practical setups.

University of California, Irvine

Research Assistant   *Jan 2010 - Mar 2015*

- Proposed and studied a novel approach to make use of a wireless transmission strategy called Interference Alignment for understanding and tackling the open problem of multiple unicasts.
- Analyzed the effects of network structures on the proposed approach, identified the key structures required for its feasibility and validated the results with simulations.
- Developed tools for characterizing the Degrees of Freedom (DoF) of Interference Channels with algebraic dependencies.

Teaching Assistant   *Apr - June 2009, Jan - Mar 2010*

- Taught undergraduate courses on Probability and Random Processes.

COMPUTING
SKILLS

Programming : Python (Numpy, Scipy, Pandas), Matlab/Octave, C (limited working proficiency)
Operating Systems: GNU/Linux, MS Windows, Mac OS
Miscellaneous: Bash/Awk scripting, Version Control, LaTeX

PATENTS AND
PUBLICATIONS

Google Scholar Profile : 7 publications with over 125 citations.
"Video Stream Network Coding in Information Centric Network", US Patent App. 15/414,781.
"Content Placements for Coded Caching of Video Streams", US Patent App. 15/160,548.