
SUMMARY

I am a successful system engineer with extensive experience on software modelling, image/vision algorithms and architecture design at top high tech companies seeking a position as machine learning software engineer

EXPERTISE

- Data analysis using Supervised/Unsupervised Learning Models
- Image/Video Processing and Computer Vision Algorithms for Multimedia Devices
- Software Modeling of data processing systems
- Hardware Architecture design for Image Recognition, Pixel Processing and Compression Algorithms
- Wireless communication specifically on error control coding algorithms and implementations

WORK EXPERIENCE

November 2015- Present, Imaging System Engineer,

- Working on algorithm/ architecture analysis and design of image processing / recognition algorithms for wearable/multimedia devices
- Developing system usecase flow for display and camera (ISP) algorithms

September 2014- November 2015, Senior Scientist,

- Worked on performance and quality improvement techniques for multimedia/display systems. Developed/optimized novel image/video quality improvement algorithms and architectures such as sharpening, noise filtering, watermarking

August 2012-September 2014, Performance Engineer,

- Developed time accurate software models for hardware components of the most popular mobile device (iPhone&iPad) System on Chips (SoC) such as camera, display, fabric and investigated the effects of architectural modifications.
- Created data-analysis tools to visualize correlation between different design parameters to improve system performance

August 2008-June 2012, Graduate Research Assistant,

- Implemented novel techniques to mitigate the effects of system failures using statistical behavior of the image processing systems which achieved up to 96% original quality with 30 to 40% energy saving
- Worked on Bayesian Student Tracker System that provide guidance to users' based on their knowledge level

TECHNICAL SKILLS

- **Programming Languages:** Python, C , C++, Lua, Verilog, Javascript, HTML, SQL
- **Tools:** Matlab&Simulink,, Git, Perforce

EDUCATION

INSTITUTION	DEGREE	GRADUATION	FIELD OF STUDY	Course-GPA
Arizona State University	Ph.D.		ECEE	4.00
Arizona State University	M.S.		ECEE	4.00
	B.S.		EE	3.84

CERTIFICATES/TRAINING

Udacity Machine Learning Nanodegree Program: Completed several projects on Metric Analysis (Housing Market Estimation), Supervised (Student Intervention System) and Unsupervised (Customer Segment Creation) Learning

Udacity Deep Learning: Completed CNN based learning algorithm for image recognition based on deep-learning methods

COURSEWORK

Information Theory, Data Mining, Digital Image and Video Processing, Biomedical Image Processing, Wireless Communication, Error Control Coding and Cryptography, Computer Architecture, Hardware-Software Co-design

AWARDS

2008-2010 [REDACTED] Fellowship
2001 [REDACTED]

PUBLICATIONS

More than 150 Citations in Total

PhD Thesis: [REDACTED] Most of portable devices are battery powered and every application comes at a cost of higher energy consumption. The challenge is to minimize the energy cost while executing increasingly complex functionalities with minimal degradation in algorithm performance and quality. In this work, we have used several algorithm, architecture level techniques that trade-off energy with system performance for multimedia signal processing algorithms such as video/ image processing.

Master Thesis: Coherent MIMO-OFDM and information rates for underwater acoustic communications

Journals:

[REDACTED]

Conferences:

[illegible]