APARNA DHINAKARAN

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Education

University of California, Berkeley *August 2012 - May 2016*
Major: Electrical Engineering and Computer Science

Regents and Chancellor's Scholarship Recipient - Highest Undergraduate Honor
Leadership Award Scholar - Most Prestigious Merit-Based Scholarship awarded by CAL Alumni Association

Skills

Python, Java, C, SQL, Matlab, LaTeX
Hadoop, Apache Hive, Coda, Github, Eclipse, GeneCluster, TreeMap

Work Experience

Software Engineer Intern, Apple Inc. *May 2015 - Aug 2015*

Emerging Technologies Team

Machine Learning Engineer Intern, TubeMogul *June 2014 - August 2014*

Developed clickbot detection algorithm for differentiating between humans and bots for advertising campaigns.

Created Hive Tables to collect site visitation and frequency statistics for user differentiation. Detected patterns in user activity using GeneCluster and Treeview to determine key features for hierarchical and multidimensional clustering. Integrated Boosted Decision Trees and Neural Nets in development of bot taxonomy.

UC Berkeley Mathematics Teaching Assistant *August 2013 - May 2014*

Taught UC Berkeley undergraduates Multivariable Calculus, graded homeworks, and lead office hours.

Research

Berkeley Orders Of Magnitude (BOOM): Bloom *February 2015 - Present*

Advisor: Professor Joe Hellerstein, EECS
Bloom is designed to avoid the traditional mismatches between distributed platforms and sequential programming languages. It features a "disorderly" approach to program state and logic, which encourages data-centric parallel thinking.

Berkeley Represent: Information Technologies for Farmers *August 2014 - May 2015*

Advisor: Professor Tapan Parikh, School of Information
Selected by Computing Research Association for National Science Foundations's funding
Designed smart rainfall measurement system to increase Kenyan smallholder farmers' access to markets and knowledge.
Contributed to a data science initiative to analyze Avaaj Otalo, a voice based social media for farmers in Gujarat, India.

Berkeley Energy and Sustainable Technologies (BEST) : Smart Lighting Systems *February 2013 - June 2014*

Advisor: Professor Alice Agogino, Mechanical Engineering
Developed a new lighting system, that builds a predictive model of a room to effectively allow lights to adapt to occupant demands.
Designed multi-hop network to a local server to implement computations for light level predictions and optimal sensor placement.
Developed indoor lighting inverse model, SQLite database for linear regression models and user-friendly installation program.

Publications

Sensor-Based Predictive Modeling for Smart Lighting in Grid-Integrated Buildings
Basu, C., Caubel, J.J. , Kyunam Kim, Cheng, E., Dhinakaran, A., Agogino, A.M.,Martin, R.A.
IEEE Sensors Journal (Volume: 14 , Issue: 12), 2014.

Affordable and Personalized Lighting using Inverse Modeling and Virtual Sensors
Chandrayee Basu; Benjamin Chen; Jacob Richards; Aparna Dhinakaran; Alice Agogino; Rodney Martin.
Proceedings of SPIE, Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems, 2014

Selected Projects

Smart Storybook: http://expresso.cearto.com/

An augmented environment coordinator for storytelling. Smart Storybook polls devices in a room for storytelling capabilities (e.g. light, sound, smell) and contributes a content creation tool that synthesizes output into a unique storytelling experience.

BestRegards : Handwritten Thank You Cards Generator

Developed a web service that automates handwritten thank you cards using Maillift's API and Ruby on Rails. Implemented a custom-built JQuert calculator that informs how much time users would save. Integrated Stripe's API to accept payments.

Activities

Speech and Debate: Ranked Distinction by National Forensics League
Ballet: Completed Advanced Pointe training and certified by Mission Dance and Performing Arts Studio
Saraswathi Ammal Charitable Trust: Raised over 6000 dollars towards the orphanage's education
Cal N.E.R.D.S. Researcher for CAL New Experiences for Research and Diversity in Science