

GAURAV PARUTHI

Software Engineer / Entrepreneur / Researcher



EDUCATION

Ph.D. Information Science	2011- 2017
<i>University of Michigan, Ann Arbor, MI</i>	
Graduate Certificate in Computational Discovery and Engineering	2015
B.E.(Honors) Electrical and Electronic Engineering	Fall 2005-2009
<i>Birla Institute of Technology and Science, Pilani, India</i>	

PROFESSIONAL EXPERIENCE

Co-founder/ CTO, Arboreum	May, 2020 - Now
Credit union as a service providing credit access via decentralised trust networks	
- In top 10% of YC Winter 2021 applicants. Received grants from Algorand and Consensus.	
- Led 3 pilots giving out loans to 40 borrowers (low-income farmers and blue-collar workers)	
- Led a team of 2 engineers to develop the frontend and backend of the lending platform (product demo)	
R&D Engineer, KindredAI	2018 - 2020
Shipped computer vision models and systems for robot manipulation at scale. Robots sorted more than 20 million items for e-commerce fulfillment. The product leveraged my full-stack expertise for:	
- Production software that powered the AI for robots that sorted millions of items every month.	
- Led the human annotation efforts at Kindred. Webapp was used by 100s of human workers to hand-annotate more than 40000 images.	
- Built system for reinforcement learning in real and sim environment (https://arxiv.org/abs/2003.06734)	
Human-Computer Interaction Researcher, University of Michigan	2011 - 2017
Developed systems to explore novel design space after qualitatively understanding complex human behavior. Projects details can be found at gauravparuthi.com	
Design Technologist, IDEO CoLab	Summer 2017
Designed an end-to-end smart cities product involving user research and extensive prototyping.	
Researcher Engineer, Microsoft Research	2009 - 2011
Designed, engineered, and evaluated educational technologies for resource constrained environments.	

SKILLS

Core: Python, Javascript, Swift, C/C++, C#, SQL, AWS, GraphQL, Postgres
Frontend Frameworks: React, Typescript, NextJS, Mobx, Flask, FastAPI
ML Prototyping: Pytorch, Scipy, Numpy, Pandas, Keras
Hardware Prototyping: NVIDIA Jetson Nano, Arduino, Raspberry PI, nRF52840

SELECTED PUBLICATIONS

Zaky Y., Paruthi G., Tripp B., Bergstra J. **Active Perception and Representation for Robotic Manipulation** *Computer Vision and Pattern Recognition, arXiv preprint 2020*
Paruthi et al. **Finding the Sweet Spot(s): Understanding Context to Support Physical Activity Plans** *IMWUT'18*
Paruthi et al. **Heed: Exploring the Design of Situated Self-Reporting Devices** *IMWUT'18/ UbiComp'18*
Paruthi et al. **Utilizing DVD players as low cost offline Internet Browsers** *CHI'11 Top 5%*

AWARDS AND HONORS

Top 1% IDEO CoLAB Fellowship	2017
First , Exposition, School of Information, University of Michigan	2013, 2016
First , Kaggle Competition for the Course SI-721 Data Mining,	2012
National Finalist , for Google Product Prodigy,	2009
National First Runner-Up , in Microsoft's Imagine Cup, in Software Design, Out of 4000 Teams.	2007
First , Binary Pirates, India's first Capture the flag hacking contest, Quark	2008