### Archit Gajjar

Contact

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Info

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Research Interests • Approximate Design on Fog/Edge System

• Energy-Quality (E-Q) Tradeoff on ASIC/FPGA Design

• Internet of Things (IoT) & Embedded Systems

**EDUCATION** 

University of Houston - Clear Lake, Houston, TX

M.S., Computer Engineering

Dhirubhai Ambani Institute of Information and Communication Technology, Gujarat, India

B. Tech., Information and Communication Technology

Work

Research & Teaching Assistant

August 2017 – Present

Expected: December 2018

GPA: 3.9/4.0

GPA: 5.6/10.0

EXPERIENCE CENG3316 Electronics & CENG3116 Lab for Electronics & CENG5534 ADSD

Department of Engineering

University of Houston Clear Lake (UHCL)

System Developer Intern

May 2015 – October 2015

Inweon IT Innovations Pvt. Ltd. Greater Noida, India

Using Visual Studio and OpenCV, a code was developed to find the length of rice from the provided image. Later, Raspberry pi micro-controller was set up to perform the code remotely.

Intern QX KPO Services Pvt. Ltd. Ahmedabad, India December 2014 – January 2015

For one month, gained knowledge about OSI (Open Systems Interconnection) model in the field of network and communication along with practical implementation.

SKILLS

### **Programming Languages:**

• Verilog, VHDL, Python, C, C++

### **Tools:**

• Arduino, Keil, LTSpice, Raspberry Pi, Beagle Bone Black, OpenCV, Vim, Latex, FPGA, NI Multisim, ModelSim, MATLAB, Vivado

- Publications A. Gajjar, X. Yang, etc., "An FPGA Synthesis of Face Detection Algorithm using HAAR Classifiers," Intl. Conference on Algorithms, Computing and Systems (ICACS2018), Accepted, 2018.
  - X. Yang, L. Wu, A.Gajjar etc., "A Vision of Fog Systems with Integrating FPGAs and BLE Mesh Network," Intl. Conference on Algorithms, Computing and Systems (ICACS2018), Accepted, 2018.
  - Y. Zhang, X. Yang, A. Gajjar, etc., "Exploring Slice-Energy Saving on An Video Processing FPGA Platform with Approximate Computing," Intl. Conference on Algorithms, Computing and Systems (ICACS2018), In Press, March, 2018.

- Y. Zhang, X. Yang, A. Gajjar, etc., "Hierarchical Synthesis of Approximate Multiplier Design for Field-Programmable Gate Arrays (FPGA)-CSRmesh System," Intl. Journal of Compt. Applications (IJCA), Vol. 180, No. 17 PP. 1-7, Feb. 2018.
- A. Gajjar, Y. Zhang, and X. Yang, "Demo Abstract: A Smart Building System Integrated with An Edge Computing Algorithm and IoT Mesh Networks," The Second ACM/IEEE Symposium on Edge Computing (SEC2017), Article No. 35, Oct. 2017. (doi>10.1145/3132211.3132462).

# EVENT

- X. Yang, Y. Zhang, A. Gajjar, H. Schmoyer, and N. Ly, "Learning-on-Chip: Facial PRESENTATIONS Detection with Approximations of FPGA Computing," 2018 Robotics & AI Day, UHCL, Aug. 03, 2018.
  - A. Gajjar, X. Yang, "Poster presentation A Wide Area IoT Mesh Network With Edge Computing," IEEE Innovation and Automation Conference, Guilruth ctr., NASA., October, 2017.
  - A. Gajjar, X. Yang, "Poster presentation A Smart Home/Building System Integrated with An Edge Computing Algorithm and CSRmesh Networks," Houston Robotics and AI Day, July, 2017.

### ACADEMIC **PROJECTS**

• Low Cost Security System Using Off the Shelf Components January 2016 -April 2016

A security system capturing image of an intruder and informing to the designated person.

- Research Intern May 2016 – July 2016 Gained knowledge of Cadence Encounter, tickle files, optimization.
- Surveillance Bot January 2015 – April 2015 A live video stream from a manually controlled surveillance robot.
- 5-Stage Pipeline processor July 2014 – November 2014 Basic 5-stage pipelined processor development.

### Honors and AWARDS

- Research Scholarship Award, Dr. Ted Leibfried Legacy, UHCL, July, 2018 (2/50 Students)
- Graduate Student Ambassador, College of Science & Engineering, UHCL (2 Students out of CENG Program) 2018
- Phi Kappa Phi Honor Society Invitation, UHCL, March, 2018
- Research/Teaching Assistant Scholarship, UHCL, 2017-2018
- NSF Student Travel Grant Award from SEC, 2017
- Leadership Honor, Omicron Delta Kappa(ODK), Hilary Jo Karp Circle Honor Society, November 2017

## Volunteer EXPERIENCE

• International Student Orientation Leader, UHCL

2017

• IEEE Member

- 2013 Present
- Leader of Special Interest Group on Microcontrollers, IEEE SB DA-IICT
- I'Fest, Mentor, IEEE SB DAIICT
- TENSYMP'15 Volunteer, Region 10 IEEE International Conference, India
- I'Fest, Event Coordinator
- Teaching Assistant, Workshop on Embedded System and Arduino, PDPU, India