

KHAN SHAIKHUL HADI

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PROFESSIONAL EXPERIENCE

Research Assistant

📅 2021-Present

ARPERS RESEARCH GROUP, UCF

Research Focus : Performance, correctness & crash recovery of persistent memory system for parallel programming

Teacher Assistant

📅 2022

SCHOOL OF ENGINEERING, UCF

Course : CDA 5106 (Advance Computer Architecture).

Research Engineer

📅 2017-2018

BUET-ENERGY PAC RESEARCH COLLABORATION HEQEP SUB-PROJECT CP#3817

Designed and characterized *BUET VLSI Standard Cell library*

📍 Florida, USA

📍 Florida, USA

📍 Dhaka, Bangladesh

RESEARCH & PUBLICATIONS

Hardware Support for Durable Atomic Instructions for Persistent Parallel Programming

📅 2021-2022

DAC'23

Developed a generalized solution to provide durable atomicity for parallel programming in persistent memory machine

BUET LED Driver Digital IC

📅 2017-2018

Fabricated on June, 2018

Designed a mixed signal constant current LED driver controller using *BUET VLSI Standard Cell library*. Fabricated IC has been tested and analyzed for future development purpose

Optoelectronic Properties of InGaAs/InP Single Photon Avalanche Diode

📅 2016-2017

B.Sc. Thesis, ICTP'2017

Developed a MATLAB based simulation to model for InGaAs/InP based SPAD based on established theories . Work published on *IEEE International Conference on Telecommunications and Photonics (ICTP)*

ACADEMIC PROJECTS

8 bit Specialized SAP microprocessor

8-bit,single bus, 16 instruction SAP microarchitecture circuit with 64KB memory is designed in Proteus Circuit Simulator. C++ based compiler is designed to convert assembly instruction to binary input for the circuit.

Personal operating system

Developed a personal OS from scratch to understand interaction between OS and hardware. Current state features boot-loader, interrupt handler, video driver.

Sentiment analysis of stocks from financial-news headline with twitter feed-back

Analyze public sentiment for a company stock based on relevant news headlines using *Natural Language Toolkit (nltk)* library. For each headline, relevant tweets also analyzed for public sentiment to re-evaluate public sentiment.

Load-flow analysis tool

MATLAB based Gauss-seidel load flow analysis tool with MATLAB GUI user interface and could analyze up to 100 power grid bus

Statistical data based smart traffic control system

This traffic control system perform real time traffic data analysis for traffic predictability and cell based design for ease of installation for developing and underdeveloped country.

EDUCATIONAL

PhD in Computer and Information Science

📅 On Going

📍 Florida, USA

UNIVERSITY OF CENTRAL FLORIDA (UCF)

Research: **Computer Architecture**

M.Sc. in Computer Science

📅 2024

📍 Florida, USA

UNIVERSITY OF CENTRAL FLORIDA (UCF)

B.Sc in Electrical and Electronic Engineering

📅 2017

📍 Dhaka, Bangladesh

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)

SKILLS

Programming Language

C++, PYTHON, BASH SCRIPT, VERILOG, MATLAB

Specialized Tool

GEM5 SIMULATOR

CADENCE DESIGN SUIT

SNIPER MULTI-CORE SIMULATOR

WORKSHOP & TRAINING

GEM5 BOOTCAMP 2022

Organizer : UNIVERSITY OF CALIFORNIA, DAVIS 📅 5 Days

Workshop on RISC-V Technology and SiFive Tutorial

Organizer : SiFIVE INC & IEEE BANGLADESH 📅 One Day

ONLINE CERTIFICATION

Introduction to Bash Shell Scripting

PROJECT NETWORK (COURSERA) 📅 Jul 2020

Fundamentals of Parallelism on Intel Architecture

INTEL (COURSERA) 📅 Aug 2020

Unlocking Information Security

TEL AVIV UNIVERSITY (ISRAELX) 📅 Aug 2020

IT Fundamentals for Cybersecurity Specialization

IBM (COURSERA) 📅 Oct 2020

Technical Support Fundamentals

GOOGLE (COURSERA) 📅 Oct 2020

Using Python to Interact with the Operating System

GOOGLE (COURSERA) 📅 Oct 2020

SCHOLARSHIP

2025 FCI Student Scholarship

UNIVERSITY OF CENTRAL FLORIDA