Khan Shaikhul Hadi

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PROFESSIONAL EXPERIENCE

Research Assistant
📅 *2021-Present*   📍 *Florida, USA*

ARPERS RESEARCH GROUP, UCF

Research Focus : Crash consistency for parallel programming on persistent memory machine

Teacher Assistant
📅 *2022*   📍 *Florida, USA*

SCHOOL OF ENGINEERING, UCF

Course : CDA 5106 (Advance Computer Architecture). Helped students to understand complex topics and evaluate programming & exam papers

Research Engineer
📅 *2017-2018*   📍 *Dhaka, Bangladesh*

BUET-ENERGYPAC RESEARCH COLLABORATION HEQEP SUB-PROJECT CP#3817

Designed and characterized *BUET VLSI Standard Cell library*

RESEARCH EXPERIENCE

Durable Atomicity for Non-Volatile Memory (NVM)
📅 *2021-2022*   *Paper submitted in DAC'23*

Developed a generalized solution to provide durable atomicity for parallel programming in NVM 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 (SPAD)
📅 *2016-2017*   *B.Sc. Thesis Work, published in ICTP*

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

ACADEMIC PROJECTS

64KB Specialized SAP microprocessor

16-bit,single bus, 16 instruction SAP microarchitecture circuit 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 and Keyboard driver and Future development plan includes terminal command, file system etc.

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 software 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 Science
📅 *2021 - Present*   📍 *Florida, USA*

UNIVERSITY OF CENTRAL FLORIDA (UCF)

Research: **Computer Architecture**

B.Sc in Electrical and Electronic Engineering
📅 *2012-2017*   📍 *Dhaka, Bangladesh*

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)

Major in Electroics

SKILLS

Programming Language

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

Specialized Tool

GEM5 SIMULATOR(BEGINNER)

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 Days*

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*