Ketaki Jain

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Experience

GEP WORLDWIDE | Business Analyst- Technology Services
Aug 2020 – July 2021 | Mumbai, India

- Implemented end to end client Source-to-Pay structure on the internal cloud platform - GEP Smart. Conducted internal and client training workshops on Out-Of the Box (OOB) implementations of GEP Smart
- Work involved data visualization, price benchmarking, savings maximization and reporting which helped me sharpen research, communication and leadership skills

INSTITUTE FOR MEDIA INNOVATION | Research Intern
Jan 2020 – June 2020 | Nanyang Technological University, Singapore

- Worked on identifying and coding conversation triggers and gaze tracking for exploring proactive behavior in a social humanoid robot.Demonstrated proactive greeting, initiation of conversation, and gaze tracking

RELIANCE INDUSTRIES LIMITED | Summer Intern
May 2019 – July 2019 | Jamnagar, India (# 1 refinery)

- Established communication between Eltek Fire alarm panel to Rockwell PLC 5/40-multi master-slave, using RS 232, 485 and Ethernet Modbus TCP/IP. Learned about fault detection systems, security and damage control protocols

NATIONAL CHEMICAL LABORATORY | Trainee- embedded lab
June 2018 – July 2018 | Pune, India

- Interfaced LCD, keyboard and stepper motor with 8051 MCU using Assembly programming. Studied ARM MCU architecture and ISA

Projects

2 FACTOR AUTHENTICATION USING UWB | Embedded C, Python
Dec 2021

- Designed and demonstrated a robust and phone- independent 2FA implementation based on user movement tracking and identification

CACHE SIMULATOR | C++
Nov 2021

- Constructed an end-to-end multi-core, multi-level cache simulator with DRAM based main memory. Evaluated performance-based metrics such as miss rate, average delays and dirty evict rates. Implemented a Utility-Based Way Partitioning scheme that reduced miss ratio by 3%

DYNAMIC INSTRUCTION SCHEDULING AND BRANCH PREDICTION | C++
Oct 2021

- Built a trace-driven simulator for a 7-stage Superscalar processor. Executed in-order and out-of-order scheduling algorithms, performed state tracking, register renaming to handle pipeline hazards, and Branch prediction performance by 34%

UNDERWATER IMAGE ENHANCEMENT | Python
Nov 2021

- Analyzed impact of traditional vs. deep-learning based methods, performed color correction and distortion reduction, improved image visual quality. Observed improvement in performance metrics by about 10%

REAL TIME VIDEO PROCESSING | MATLAB, Embedded C
April 2019

- for removal of shakes while shooting, on DSP Blackfinn BS 561
- Implemented Harris Corner Detection algorithm in MATLAB, followed by hardware

IOT BASED SOLAR TRACKER | Arduino, Eagle for PCB design
May 2019

- Smart solar tracker using real-time feedback, response time of 0.2 s
- Wireless transmission of intensity and angle to cloud using Bluetooth

Education

GEORGIA INSTITUTE OF TECHNOLOGY
Master's in Electrical and Computer Engineering
Aug 2021 - Present
GPA: 3.75 / 4.0

COLLEGE OF ENGINEERING PUNE
Bachelor's in Instrumentation and Control Engineering
Minor in Computer Science
Aug 2016 - June 2020
GPA: 9.02 / 10.0

Skills

PROGRAMMING
C, C++,Python, Assembly, Java for Android

TOOLS/PLATFORMS
OpenCV, PyTorch, OpenGL, MATLAB, CUDA, Android Studio, Code Composer Studio, PowerBI, Git, Wordpress, Adobe Premier Pro

MICROCONTROLLERS
UWB-Decawave DW1000, STM32(ARM53 core), BlackfinnBS561(ADI DSP), LCDK(TI DSP)

Interests
Embedded electronics, Robotics, Internet Of Things

Coursework
- Computer Architecture
- Digital Image Processing
- Mobile Computing and IOT
- Microcontroller Applications
- Broadband Communication
- Advanced Programming
- Control System Design
- Data Analytics

Co-Curriculars
•Ex-Lead at Pune Learns, a social initiative for English Language education for the underprivileged, in India
•Kayak rowing