

## EXPERIENCE

### EDINBURGH ARCHITECTURE AND SYSTEMS LAB | PHD. STUDENT

November 2022 – Now | University of Edinburgh

- Working with Prof. Boris Grot on Serverless Analytics.

### MICROSOFT IDC | SOFTWARE DEVELOPMENT ENGINEER

August 2021 – October 2022 | Hyderabad, India

- Improved Microsoft Defender for iOS using various security heuristics.

### EDINBURGH ARCHITECTURE AND SYSTEMS LAB | RESEARCH INTERN

January 2021 – August 2021 | University of Edinburgh

- Minimising cold start delays in serverless functions.
- Contributed to [vhive](#) (Open Source Framework for Serverless Experimentation).

### AMAZON PROFESSIONAL SERVICES | INTERN

August 2020 – December 2020 | Delhi, India

- Developed an automated proctoring system using eye-gaze tracking on AWS.

### MICROSOFT IDC | SDE INTERN

May 2020 – July 2020 | Hyderabad, India

- Enabled Microsoft Defender ATP to scan, quarantine and report the threats inside Linux Docker containers.
- Learnt the core concepts of containerization via linux namespaces, proc filesystem and union filesystems.

### NATIONAL INNOVATION FOUNDATION - INDIA | INTERN

May 2017 - Jun 2017 | Gandhinagar, Gujarat

- Redesigning a temporary shelter for the Salt Farmers of Kutch to keep the house 5°C cooler.
- Applied the concepts of Human centered designing and Design thinking

## PROJECTS

### NAND2TETRIS | BUILDING COMPUTER FROM FIRST PRINCIPLES

Coursera

- Built a programmable CPU capable of running binary code loaded into memory, starting from NAND gates as a part of nand2tetris course.
- Built an Assembler program that translates programs written in the symbolic Hack assembly language into binary code
- Building a compiler, a virtual machine and then an operating system starting from scratch as a part of nand2tetris course.

### STUDENT MESS REGISTRATION PORTAL | WEB SERVER

Feb 2019 - Mar 2019 | BITS Pilani, Hyderabad Campus

- Increased registration capacity 20 fold to 8000+ requests/sec with 0 % error rate by designing a robust mechanism to handle critical race conditions
- Designed CAPTCHA for the users to prevent people from scripting using go-lang + in-memory DB.

## COMPETITIONS

### SMART INDIA HACKATHON RUNNER UP | MAR 2019

- Utilised IRNSS's Messaging Capabilities to direct people towards relief centers during disasters.

## EDUCATION

### BITS PILANI

### HYDERABAD CAMPUS

B.E COMPUTER SCIENCE AND

MSc. IN ECONOMICS

Cum. GPA: 8.71 / 10

2016-2021

## SKILLS

### PROGRAMMING

Python • C/C++ • go lang  
Objective C • swift • PHP

### TECHNOLOGY

Git/Github/Gitlab • AWS  
Docker • Linux  
Embedded Systems

## COURSEWORK

### UNDERGRADUATE

Computer Architecture  
Operating Systems  
Computer Graphics  
Parallel Computing  
Data Mining  
Game Theory  
Industrial Economics  
Econometrics  
Principals of Economics  
(Teaching Assistant)

### MOOC

- Human Centered Design by IDEO [↗](#)
- Learning How to Learn [↗](#)
- Nand2tetris -1 [↗](#)

## POSITIONS OF

## RESPONSIBILITY

### Ex Officio

Student Welfare Division  
Nucleus

### Tech lead

Student Welfare Division  
Nucleus

## LINKS

Github:// [shyamjesal](#)

LinkedIn:// [shyam-jesalpura](#)