Shreyas Kishore · श्रेयस किशोर

work experience

Apple
May 2021 – August 2021

Platform Architecture Intern
Worked on driving trace-driven simulation from checkpoints collected from silicon.

Synchrony
August 2020 – May 2021

UI/UX Design Intern
Worked on redesigning Synchonry's eService platform for credit card users.
Conducted user surveys and implemented a data-driven approach for design thinking.

Apple
May 2020 – August 2020

Silicon Validation Intern
Developed a software framework that parses & visualizes SoC request-response traces, and provides a Python notebook interface for data-driven discovery and debugging.
Added high-level front-end components that parse advanced SoC scan-dump structures.

Synchrony
August 2019 – May 2020
Champaign, IL

VUI Design Project
Worked on redesigning Synchonry's Alexa Skill for the Amazon Store Card.
Conducted user interviews and implemented design changes based on the feedback.

Google
May 2020 – August 2020
Mountain View, CA

Software Engineering Intern
Worked on Procella, a distributed, highly-scalable SQL query engine built for YouTube analytics, currently serving hundreds of billions of queries per day.
Implemented new caching policies in Procella to accelerate its adoption across teams in YouTube and Google.

Synchrony
May 2020 – August 2020
Champaign, IL

Hardware Engineering Intern
Built a specialized Merchant Terminal that utilizes data-over-sound to securely verify mobile payments.
Worked on firmware for the BCM2837 SoC to fulfil engineering requirements.

academic experience

Passat Research Group
Mentored by Prof. Rakesh Kumar
August 2020 – January 2022
Champaign, IL

Co-Author & Research Assistant — Rethinking Programmable Earable Processors
Worked on a project that proposed a suite of representative emerging earable applications with diverse sensor-based inputs and computational requirements.
Implemented a VLIW simulator in C++ modeling a modern DSP and ran computational kernels on the simulator.
Paper “Rethinking Programmable Earable Processors” accepted to ISCA 2022.

Research Assistant — Dual Front-End Microarchitecture Project
Analyzed the feasibility of a microarchitecture that fetches and pre-processes both on-path and off-path instructions on low-confidence branch prediction.
Implemented this modified microarchitecture on the Gem5 Simulator.

projects

SIGCloud – ACM@UIUC

Founded a student organization under ACM@UIUC to teach students how to leverage cloud technologies and DevOps for their projects.
Focused on using platforms such as AWS, Google Cloud Platform, Microsoft Azure, DigitalOcean, CircleCI etc.

NanoRV32I

Designed a RISC-V (RV32I) processor in SystemVerilog from scratch, among a team of three students.
Implemented advaced features such as pipelining, out-of-order execution, branch prediction, speculative execution, and a multi-level cache hierarchy.

Borland C++ for MacOS
2,000+ Monthly Downloads
145,000+ Users

Ported Borland's MS-DOS based C/C++ IDE to modern MacOS systems, with platform-specific optimization and custom keymaps.
Used by high school students across India for computer science coursework.

Super Hexagon on FPGA

Created a clone of the popular game “Super Hexagon” running entirely in hardware on an Altera DE2-115 FPGA Development Board.

education

University of Illinois at Urbana-Champaign
B.Sc. in Computer Engineering
Art & Design Minor
3.32 GPA
Selected Coursework:
Computer Organization & Design
Parallel Computer Architecture
SoC Design
Operating Systems
Digital Systems Laboratory
Signal Processing
Mobile Sensing
Wireless Networks
Data Structures
Algorithms & Models of Computation
Computer Security
Fall 2017 – May 2022

skills

Electrical & Computer Engineering
SoC Design
RTL & High-Level Synthesis
Signal Processing
Embedded Systems

Software & Development
C & C++
Python
Rust
HTML
CSS
JavaScript / Typescript
React
Docker
Server Administration
Software Automation
Full Stack Development

Miscellaneous
User Interface Design (UI/UX)
DIY Repair
Photoshop
InDesign
Sketch
Figma

0xsk.io
i@0xsk.io
+1 973 520 3290
github.com/0xsk
linkedin.com/in/0xsk