# **Utsav Balar**

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# Summary

Embedded Linux and BSP Engineer pursuing a Master's in Computer Science and Engineering, with hands-on experience in developing embedded systems. Proficient in BSP engineering, Linux kernel development, and hardware enablement, while staying up to date with the latest technologies and developments in the Computer Science field.

# **Work Experience**

#### **Embedded AI Engineer**

PamirAI, California, San Francisco, USA — Feb 2025 - Present

- Working on Distiller Agentic OS for Distiller Two by PamirAl
- Includes Linux firmware, kernel and higher level software stack development

#### **Freelance Linux Kernel Developer**

Self, Surat, Gujarat, IN — Jan 2024 - Present

- Worked on multiple freelance projects involving BSP development, Linux kernel development, and driver development.
- Supported platforms like Qualcomm Snapdragon, Raspberry Pi, and Rockchip SoCs.

#### **Linux Kernel and BSP Engineer**

Vicharak, Surat, Gujarat, IN — Dec 2022 - Dec 2023

- Led BSP development for Rockchip ARM boards (RK3399, RK3588).
- Built images for Armbian, Buildroot, Debian, Manjaro, Ubuntu, Yocto.

#### **Junior Linux Kernel Intern**

Vicharak — May 2022 - Jul 2022

- Performed Linux bring-up for Rockchip RK3399 board.
- Built a secure boot encryption module with Linux crypto API.

#### **Hobby Projects**

Self — Jan 2019 - Dec 2023

• Custom Linux kernels for Xiaomi & Samsung SoCs.

• Created AOSP ROMs, optimized for performance and CI/CD integration.

### **Education**

Master's in Computer Science and Engineering — NIT Meghalaya (Expected Jun 2026)

**Bachelor's in Computer Engineering** — UKA Tarsadia University (2019 - 2023)

- Developed de-Googled Android ROM with custom kernel
- Created university management system using PHP & MySQL
- Built graphical auth plugin for Chrome/Firefox

#### **Skills**

- Proficient: C, Rust, Bash, AWK, Embedded Linux, Linux Kernel, Git, AOSP
- Semi-proficient: Yocto/Buildroot, U-Boot, ARM
- Familiar: Python, C++, PHP, MySQL, MongoDB, HTML/CSS, React, Node.js
- Tools: GCC/Clang, GDB, QEMU, Git, Docker, Jenkins, CI/CD
- Soft Skills: Problem-solving, Collaboration, Attention to Detail

#### **Volunteer Work**

Conducted technical workshops on CPU architecture, compilers, and Git at Vicharak (2022–2023).

## Languages

English (Fluent), Hindi (Fluent), Gujarati (Fluent)

#### **Interests & Hobbies**

Open-Source, Embedded Systems, Compilers, Al, Biology, Space

Traveling, Music (Rock/Indie/EDM), Cricket, Table Tennis, Tech Exploration

### **Socials**

GitHub LinkedIn Twitter Telegram Reddit