






Soumya Ranjan Patnaik

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EDUCATION

International Institute of Information Technology, Naya Raipur

B, Tech, Computer Science

CGPA: 8.32 / 10.00

Raipur, Chattisgarh

Dec 2020 - Jul 2024

WORK EXPERIENCE

PRISM Machine Learning Intern

Jul 2022 - Present

Samsung Research

- Working on bleeding edge technologies related to Artificial Intelligence and Computer Vision
- Details of this role cannot be disclosed due to Non-Disclosure Agreement with Samsung Research

Google Summer of Code Contributor ([Certificate](#))

Jun 2022 - Oct 2022

CCEXtractor Development

- Worked on the integration of Wayland with Regolith Linux.
- Created [regolith-displayd](#) and [regolith-inputd](#), that provides display and input related D-Bus bindings for gnome-control-center
- Added Wayland support for core regolith utilities like [regolith-look](#), [regolith-session](#) and [ilia](#)

Full Stack Web Development Intern ([Certificate](#))

Mar 2022 – Jun 2022

Webknot Technologies

- Lead developer for Palette PAWs, an administration and management solution for an EdTech startup
- Worked on the authentication and login flow of the application
- Learned to replicate designs provided by UI/UX teams with HTML, CSS and Js by frameworks like Material UI

OPEN SOURCE EXPERIENCE

Contributor | [Regolith Linux](#) 

Mar 2022 – Present

- Maintainer for a [Sway fork](#), a keyboard-driven window manager for GNU/Linux based operating systems
- Working on testing and packaging of Regolith on Wayland

PROJECTS

Visual Question Answering | Research Project

Present

- An application for helping visually impaired people that answers text-based questions about an image in a smart home environment
- Wearable smart glasses send the video feed and the question asked by the user to a local server and play an audio response
- Local server provides API endpoints for streaming the video feed and audio and feeds the data into FasterRCNN and Visual BERT models for predicting the answer to the question

Tech Stack: Python, Pytorch, BERT, Hugging Face, Arduino C++

Trawl | Open Source Project | [Source](#)

Jul, 2022

- A file-based configuration manager for Linux, intended to replace Xresources that works independently of the display backend
- Comprises a D-Bus based configuration daemon (trawld) and a CLI (trawldb) for creating, modifying and deleting resources
- Has unit tests and integrations tests with net code coverage of 73% to facilitate maintainability and reliability

Tech Stack: Rust, D-Bus, C

Social IIITNR | Group Project (3) | [Live](#) [Source](#)

Feb, 2022

- A Social Media Application for our university aimed to promote coding culture, share achievements, monitor opportunities and manage events
- Implemented user authentication using OAuth2.0 and JWT tokens with role-based private routes
- Wrote core logic for the backend, including elastic search and a basic graph-based curated feed

Tech Stack: ReactJs, NodeJs, NestJs, PostgreSQL

iCAP | Research Project | [Source](#)

Aug, 2021

- Created an IoT based real-time wearable for pulse monitoring and accidental fall detection of remote maintenance workers.
- Implemented a novel false positive prevention system for preventing false alarms and workplace panic
- Created a novel pulse rate based attendance tracking system that can calculate a worker's daily work duration

Tech Stack: C++, Python, JavaScript, NodeMCU, HTML, CSS, Arduino, Django

ACHIEVEMENTS

- Completed [Google Summer of Code \(GSoC\)](#) under the organization CCEXtractor
- Qualified for the [Samsung Prism](#) program

PUBLICATIONS

- S. Ranjan Patnaik, K. Singh, V. Udutalapally and D. Das, "iCAP: An IoT based Wearable For Real-Time Accidental Fall Detection and Health Monitoring of Remote Maintenance Workers," 2022 IEEE 7th International conference for Convergence in Technology (I2CT), 2022, pp. 1-6, doi: 10.1109/I2CT54291.2022.9825406.

SKILLS

Languages: Rust, C, C++, Python, Java, JavaScript, TypeScript, SQL, Makefile, CMake, Vala

Technologies: Git, GitHub, D-Bus, GTest, Qt, ReactJs, NodeJs, NestJS, ExpressJs, Numpy, Matplotlib, PostgreSQL

Platforms: Linux, Windows, Arduino