

Navan Chauhan

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Passion for multi-disciplinary problem solving, with a focus on computer vision, machine learning, and full-stack development.

Skills

inter-disciplinary research machine learning computer vision augmented reality
full-stack development devops

Programming: Python, Javascript, Swift, Go **Databases:** MySQL, Postgres, SQLite, Meilisearch **Linux:** Arch, Nix, Ubuntu, Debian **DevOps:** CI/CD, Docker, Ansible, Git, AWS, GCP, Digital Ocean **Frameworks:** AR.js, Flask, React, Next.js, Laravel, Bootstrap, Tailwind

Experience

Research Associate Intern, YewSavin, Inc.

2020-Present, Hybrid, Part-time

- Wrote a pipeline for finding substructures from PubChem, along with custom SMARTS generation for our pipeline and patent filings.
- Developed an end-to-end Computer Vision pipeline for a custom lateral flow assay reader to calculate rate of change, using OpenCV.
- Wrote multiple automated scripts and bots for data processing, web-scraping and intelligent sentry reporting. Including, a full-text search engine built to index FDA's 510(k) documents, along with OCR correction by using a language model.

Technologies used: Python, Golang, React Native

Programming and Electronics Lead, University of Colorado, Boulder, Racing Team (CUBRT)

2021-Present, Boulder, CO

- Developed a custom RPi-based telemetry system and streaming system for the team's main racecar.
- Developed a custom Radio transmitter and receiver system for the team's racecars, with API integrations for automatic STT.
- Undertook a full rewiring of the team's main racecar, including a custom battery management system, and a custom CAN bus system.

Freelance Work

2019-Present, Remote

- Modernised a client's Laravel website, migrating from PHP 5.6, adding integration tests, CI/CD, and a new design.
- Developed proof-of-concept for a client's Augmented Reality project, using AR.js.
- Other projects include a custom Discord bot, a custom web scraper, and a custom web-extension.

Awards & Recognition

- Student Council, Birla Vidya Niketan

- President (2020-21)
- Dy. Head Boy (2019-20)
- National Cyber Security Championship, Techtron
 - Winner (2017)
- Ideate for India, Ministry of Electronics and Information Technology (India)
 - Winner (2018-2020)

Projects

Personal Blog (2019-present)

- Authored a series of articles, tutorials, and code-snippets.

FDA 510K Search (2022-present)

- Full-text search for 510(k) premarket notifications, with automatic predicate tracking, and more.
- The program architecture allows the entire pipeline to be self-hosted. Including the OCR Processor, Indexer, and Web Interface.

Curie - A Drug Discovery Toolkit (2022)

- Curie-Web: Web Interface
- Curie-Cli: Command Line Interface