

HARISH NAVNIT

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EXPERIENCE

Imperial Research and Innovation | *Software Research Engineer*

Apr. 2025 – Present

Imperial College London's interdisciplinary research centre in NUS, Singapore.

- Engineering *AI-first* solutions for novel research approaches in the field of **Cybersecurity & Healthcare**.
- Leading the engineering and product development for
 - * A telephonic Montreal Cognitive Assessment (MoCA) tool for patients using conversational AI agents.
 - * An end-to-end automated pen-testing platform for medical devices and hospital networks using agentic coding tools and MCP servers.

Dialpad | *Software Engineer*

Aug. 2021 – Sept. 2023

- Developed strategic microservice integrations in **Python & Vue.js**, deployed on the Google Cloud Platform(**GCP**).
- Delivered \$700k additional revenue/Q across Salesforce, Hubspot, Zendesk & Servicenow integrations.
- Implemented bespoke customer requests & provided rotational on-call support to reduce churn significantly.
- Drove engineering productivity efforts within the integrations team.
 - * Enabling self-hosted integrations on the Dialpad platform.
 - * Set up behaviour driven tests infrastructure for backend components.
 - * Transitioned **CI/CD** workflows to Github Actions and automated weekly beta releases.

ColorTokens | *Member of technical staff*

Jan. 2020 – Aug. 2021

- Implemented the architectural re-design of XShield, an enterprise **micro-segmentation** platform, by migrating from a monolith to a **micro-service** based design.
- Prototyped, built & maintained **Python/Flask** micro-services for discovery and real-time monitoring of customer assets on public clouds, viz **AWS** and **Azure**, forming a robust *Cloud Security Posture Management(CSPM)* offering. Further developed,
 - * an interval based polling mechanism for asset discovery.
 - * a real-time event ingestion pipeline for platform events using serverless(**AWS Lambda**) functions and custom webhooks.
 - * Infrastructure-as-Code(**IaC**) polices using Cloud Custodian to facilitate policy enforcement & compliance.

Anapi | *Senior Software Engineer*

Aug. 2018 – Sept. 2019

- Joined as the first engineer, responsible for maintaining and releasing all software offerings.
- Responsible for hiring, onboarding and mentoring junior engineers.
- Designed a robust digital insurance **API** using **Node.js** deployed via **Docker** builds to **AWS**, to help online businesses enable on-demand protection through appropriate insurance products.
- Architected bulk policy purchase and claims ingestion pipelines, ensuring **data sanitization** for regulatory and auditory compliance.

Spectral Insights (acq. **Evident Scientific**) | *Software Engineer*

Mar. 2017 – Jun. 2018

- Integrated software components of a medical whole slide scanning device, viz. a **C++** image processing pipeline, **PyQt** GUI for hardware interface and **Django** cloud service.
- Maintained a **Python** cloud interface to publish the derived analytics for a pathology slide scan.

INTERNSHIPS

Google Summer of Code | tinyc.cc/gsoc-16

Jun. 2016 - Sept. 2016

- Reworked KDE Plasma's legacy public transport applet written in **C++/Qt** to provide a convergent UI across devices of varying form factors.

Google Summer of Code | tinyc.cc/gsoc-15

Jun. 2015 - Sept. 2015

- Ported Kopete, a multi-protocol instant messaging client, from **C++/Qt** (Qt4) to the newer **QtQuick 2.0** based KDE frameworks 5 API.

PROJECTS

- OpenCtx** | openctx.org *LLM, Typescript, VSCode extension*
- Implemented an *LLM* context provider for [Sourcegraph Cody](#), which allows it to view [Semgrep](#) findings for a project and respond to user queries appropriately.
 - Demo: youtu.be/Cm_9QGrbMdA
- Mazure** | github.com/tinvaan/mazure *Azure, Mocks, Python, Testing*
- A stateful and dynamic *Python* library that enables easy mocking of Azure API calls in unit tests.
 - Supports *function decorators* and *context manager* modes of usage.
 - Demo: youtu.be/WCLCNlima0M
- ASR Metrics** | github.com/ImperialGlobalSingapore/asrmetrics *NLTK, OpenAI Whisper, Typescript, Python*
- Automatic Speech Recognition (ASR) dashboard, with speaker diarization support, interactive transcripts editor and detailed evaluation metrics.
- Postag** | github.com/tinvaan/postag *AIS, AWS, NMEA, Python*
- Generates a deployable AWS lambda function for Satellite AIS message tagging.
- UAV Mapper** | github.com/tinvaan/qtquick-mapview *C++/Qt, QML, CMake*
- Simulates a linear interpolated flight path for a UAV from available flight data on a *QML* mapview.
- Drone CI SDK** | github.com/tinvaan/drone-python *Automation, CI/CD, Python*
- Python client for the [Drone CI](#) public API.
- Dialpad Python SDK** | github.com/dialpad/dialpad-python-sdk *Python, Swagger, OpenAPI*
- Ported the project to Python3 & bumped test coverage up to 100%.

CONFERENCES AND TECHNICAL PRESENTATIONS

- conf.kde.in** | tiny.cc/kde-cmake *IIT Guwahati, 2020*
- Hosted a workshop on "*Introduction to CMake*"
- FOSSASIA summit** | youtu.be/Df9hFzZl7Tc *Singapore, 2018*
- Delivered a presentation on "*Convergent applications using the Kirigami UI framework*" introducing a modern C++/Qt framework for responsive and cross-device UI designs.
- KDE developer sprints** *Switzerland, 2015 - 2017*
- Invited to participate in the Randa Meetings | randa-meetings.ch
 - Invited to the inaugural WikiToLearn & KDE developer's sprint held at the IdeaSquare lab at CERN

EDUCATION

- Singapore University of Technology and Design** *2023 - 2024 | 4.2/5.0*
- Master of Science in Technology and Design (Cybersecurity)* *Top of batch*
- Amrita School of Engineering** *2012 - 2016 | 3.6/5.0*
- Bachelor of Technology in Computer Science and Engineering*

SKILLS

Languages: C, C++, C++/Qt, QML, Python, HTML, CSS, JavaScript, TypeScript, , Bash, Shell Scripting

Frameworks: Flask, Django, React, Vue, Node.js, Express.js, QtQuick, Bootstrap, Bulma, Tailwind, Scikit-learn, Pydantic

Databases: MySQL, PostgreSQL, Sqlite, MongoDB, AWS RDS, Google Cloud Datastore

Tools: Git, GitHub, Gitlab, Bitbucket, Unix Shell, VS Code, Datadog, Sentry, Wireshark, Tableau, Weka

AI Tools: GPT, GPT-Codex, Codex, Claude, Claude Code, Claude Code SDK, Anthropic AI, ElevenLabs, OpenAI Whisper, Gemini, Gemini Studio, Gemini SDK, Langchain, Pydantic AI, Instructor

Technologies: Git, SVN, Docker, Kubernetes, Vagrant, Supervised Learning, Decision Tree Classifiers