# Harish Navnit

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## 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*

## 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*. For eg:
  - A telephonic Montreal Cognitive Assessment (MoCA) tool for patients using conversational AI agents.
  - Automating pen-testing of 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.

**nference** | *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** | tiny.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** | tiny.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

**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 innaugural WikiToLearn & KDE developer's sprint held at the IdeaSquare lab at CERN

## 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
**Databases**: MySQL, PostgreSQL, Sqlite, MongoDB, AWS RDS, Google Cloud Datastore
**Tools**: Git, GitHub, Gitlab, Bitbucket, Unix Shell, VS Code, Datadog, Sentry, Wireshark, Tableau, Weka
**Technologies**: Git, SVN, Docker, Kubernetes, Vagrant, Supervised Learning, Decision Tree Classifiers