

Malcolm Davis

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Experience

- 5/2018 – Present **Intel Costa Rica:** System Software Development Engineer [Intel CR](#)
- Lead the automation of CI/CD processes for some of Intel simulators and helped improve the performance of them by developing tools that enable the usage of the resources of an internal cluster in our solutions.
 - Implemented containerized development environments for developing, building and deploying the libraries and binaries that are part of the aforementioned simulators.
 - Designed and developed tools to assure the security and quality of the simulators and web apps using industry standards for testing, code scanning and linting C/C++, Java, Python, Rust and Go code.
 - Speed up the process of generating an input file for one of Intel's simulators from hours/days to seconds/minutes by automating the process using industry standards for CI/CD.
- 1/2018 – 5/2018 **Costa Rica's National Center for High Technology:** Research Assistant [CeNAT](#)
- Researched and started the porting of a cluster benchmarking application from a message passing parallelism approach to an object-oriented parallelism one.
- 6/2017 – 6/2018 **GoTouch:** App Developer [GoTouch](#)
- Maintained and developed an educational mobile video game that teaches math to kids at an early age. The app is being tested to find possible bugs so the first version can be uploaded to the Play Store.
- 8/2016 – 1/2018 **Nabit:** Co-founder and CTO
- Co-founded Nabit, a research and development company that creates technology that eases the work of people who are making efforts to help the environment in different ways.
 - Lead the **H&S development team** to research and develop a wildlife investigation camera that meets the unmet needs of wildlife researchers, at half the price. We developed a prototype that uses LoRa(RF) to transfer data on a sensor network through the jungle into a GSM gateway.
- 3/2015 – 6/2017 **Tecnológico De Costa Rica:** Physics Course Assistant
- Developed a mobile assignment grading system, that halved the revision and reports time, and also constructs feedback of the average behavior of the students with auto-generated statistics.

Education

- 2012 – 2021 **Tecnológico de Costa Rica,** Cartago, Costa Rica www.tec.ac.cr
- Licentiate degree in **Computer Engineering**. Coursework included, among others, Software Architecture for Emerging Systems, Software Design and Specification, Image Signal Analysis, Computational Molecular Biology, Algorithms, Data Structures, Compilers, Operating Systems, Databases, Circuit Analysis in AC and DC, Computer Architecture, a wide range of math and sciences courses and Entrepreneurship.

Activities & Leadership

- 2019 **Network of Intel African Ancestry:** Co-lead the development pillar to generate value to the members of the employee resource group by providing the available resources to develop their careers and help them grow. Participated in different inclusion related activities.
- 2018 **GPU Mini-Hackthon:** Learned about the GPU-oriented parallelism(vectorization) techniques and led the team to second place speeding up the proposed code by a 10x+ factor.
- 2018 **Chair, IEEE TEC Branch:** Elected at the end of 2017, helped the members take advantage of their membership by the use of tech to give more exposure to the things we did at the branch.

2017 [**Professor, Parque la Libertad, CII**](#): Volunteer as a professor on a social action project that promotes culture and hopes developing Tech Skills on kids at social risk. After learning the basics, each kid chooses an Arduino project to build from scratch and they can explore different technologies with our guidance.

2017 [**Vice-Chair, IEEE Computer Society, TEC Branch**](#): Co-Founded the Computer Society Chapter on the IEEE TEC CR branch. Promoted the chapter and its activities, also prepared and imparted workshops and lectures like "Introduction to MPI", "GIT 101" and "How to get a job at big 4" to more than 100 people.

2017 [**NASA SPACE APPS CHALLENGE**](#): Mentored the 16 Costa Rican multidisciplinary teams on subjects like software and hardware prototyping and business. This is an international NASA organized hackathon that occurs over 48 hours in cities around the world, to address challenges we face on Earth and in space.

2016 [**ICPC-ACM**](#): Qualified to regional semifinals leading a team of 3 Computer Engineering students, until we were forced to resign due to a member's personal issue.

2016 [**Hardwarethon**](#): Lead a team of 4 members of different disciplines on the construction of the prototype of a wildlife camera that meets the needs of the investigators, this is only 48 hours straight. We got the organizer's attention and created a company around that product.

2016 [**Integratec Mentoring Program**](#): After being selected in the program, guided some of the Costa Rican Institute of Technology CE freshmen to incorporate into college life.

Skills

- Spanish – Native Language, English – Fluent (C1).
- Python, C/C++, JAVA, Go – Most used on personal, work, and college projects.
- Docker, Singularity, Kubernetes – Used at work in CI/CD projects.
- HPC: MPI, OpenMP, OpenACC, Netbatch - Intermediate knowledge obtained on extra assignments and hackathons.
- Teaching and Oratory – Enjoy sharing knowledge with my pairs.
- Software Requirement Elicitation and System Design – Learned in college and with a college project.
- Used different Project Management tools and Methodologies on personal and college projects.
- Circuit Analysis. Design and prototyping – Learned in college and then practiced on personal projects.
- ATmega & Raspberry Pi Prototyping – Mainly the ones I used to prototype my personal projects.
- Version Control, Continuous Integration - Used on personal, and work projects.
- Jira, Teamcity - Used on personal and work projects.
- Static Code Analysis (Klocwork, Coverity and Checkmarx) - Used on work projects.
- Snyk, BlackDuck Binary Analysis, BlackDuck Protex - Used on work projects.
- Basketball and Music Enthusiast – Right now training with the Intel team and rehearsing percussion.
- HTML, CSS, JS - Basic knowledge learned for personal projects.