

## ABOUT

## EDUCATIONAL QUALIFICATIONS

## EMPLOYMENT

## PROFESSIONAL CERTIFICATIONS

- Design for Six Sigma, Green Belt (Medtronic, 2019)

**WORK EXPERIENCE** Currently, I work as a software engineering consultant at DEPT, a technology consultancy. I have worked on four projects thus far:

- (current) Web application for Grid Deployment Office with US Department of Energy (Next.js/React, Typescript, AWS, Docker)
- Satellite communications integration with terrestrial API (Go, AWS, Docker)
- Embedded software for an FDA Class I medical centrifuge (C++, Linux Fedora, catch2 test framework)
- A static website developed for a major restaurant chain to modernize their online appearance (Gatsby/React, Typescript, GraphQL)

I write technical articles for my company (<https://engineering.deptagency.com/author/ashwin>). I spoke for an hour on a company podcast here - <https://www.twitch.tv/videos/1704919618>, and again here - <https://www.twitch.tv/videos/1725246460>. I write a variety of things for myself ([www.ashwinsundar.com](http://www.ashwinsundar.com)), mainly to practice writing, and frequently to inform on technical subjects. I also host book clubs that help engage and elevate the engineering community at DEPT.

As Software Engineer II at Medtronic, I designed, developed, tested, deployed, and supported a requirements and risk management solution built on top of Cognition Cockpit. I developed software customizations in HTML, CSS, Javascript, jQuery, and ASE, a web scripting language. I also built a data analytics application using Tableau to facilitate business insights into the engineering organization. This project was estimated to save the organization \$1.6 million per year by automating data discovery and insights into the health of the organization.

As Graduate Engineering Intern at Medtronic, I developed requirements templates in Cognition Cockpit. I researched FDA engagement strategies. I made an interactive learning tool for Response Surface Methodology using R. I developed and received a Medtronic internal patent for a competitive analysis tool, also written in R.

As Graduate Research Assistant at ASU, I led team efforts to develop embedded software and hardware for a wearable physiological testing device. I developed C++ embedded software to run on a Particle Photon microcontroller. I designed circuits and sensor to collect human physiological data. I read prior literature

and consulted first principles to inform design and development. For my applied project at the culmination of the M.S. degree, I defined and implemented an algorithm employing empirical mode decomposition, to analyze non-linear/non-stationary time series data in the form of electrocardiograph data collected from our device.