Ashwin Sundar

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Denver, CO

Software engineer with background in medtech. Strong analytical, programming, and math skills. Interested in data science and have completed a handful of professional projects, one of which earned an internal patent at an employer. Hard worker, coachable, and easy to work with. BS in neuroscience from UCLA, MS in biomedical engineering from Arizona State University.

Technical Experience with

C++, gdb, R, ReactJS, Gatsby, GraphQL, HTML/CSS/Javascript, jQuery, R, MATLAB, SQL, Tableau, ObjectStore, git, subversion

Familiarity with

Rust, Python, Objective-C, Swift, Perl, MongoDB, PowerBI

WORK EXPERIENCE

Software Engineer III
DEPT®

January 2022 - present (Denver, CO)

Current project: Terumo BCT (August 2022 - present)
- Embedded Linux (C++) medical device development for Reveos Automated Blood Processing System
- **Languages/tools used**: C++, gdb, pytest, Catch, shell scripting, Linux Fedora, Jira, JFrog Artifactory, git

Previous project: raisingcanes.com (Jan 2022 - August 2022)
- Full stack web development for a high-visibility business homepage (raisingcanes.com)
- **Languages/tools used:** Gatsby/ReactJS, GraphQL, Azure DevOps, and git

Other work:
- Technical writing about Rust programming language for client-facing blog (Benchmarking Performance, Parallel Processing)

DEPT® is a technology consultancy based in Amsterdam, Netherlands that provides services for companies such as Google, KFC, Philips, Audi, Twitch, Patagonia, eBay and more.

Software Engineer II
Medtronic

October 2017 - January 2022 (Denver, CO)

Project 1: Requirements and risk management software development
- Developed custom UI for creating Enabling Technologies requirements and risk management documents
- Developed a lightweight version of scrum for small teams to enable quick responsiveness and transparency into daily work
- Worked directly with advanced engineering stakeholders to translate input into needs and requirements
- Responsible for developing robust code and test cases, as well as handling bugs and coming up with solutions rapidly to meet strict regulatory deadlines for our products

- Created and delivered in-person training in Colorado, Texas, Florida, and Massachusetts
- Delivered virtual training for users in Shanghai, China
- Recipient of 2018 Medtronic Beacon Award for work on requirements and risk management software
- Work was presented to the 2018 Medtronic Science & Technology Conference in Minneapolis
- **Languages/tools used:** Cognition Cockpit, HTML, CSS, Javascript and jQuery, ObjectStore database scripting

Project 2: DRM/DFSS business insights software
- Built data analytics tools that facilitated business insights into product development
- Completed DRM Green Belt Certification with a project estimated to save the company $1.6 million per year
- **Languages/Tools used:** Tableau, SQL, R

Software Requirements Engineer
Medtronic

May 2017 - October 2017 (Minneapolis, MN)

- Managed requirements for class III software for remote patient monitoring
- Tools used include Microsoft Team Foundation Server and IBM Rational DOORS

Graduate Engineering Intern
Medtronic

August 2016 - May 2017 (Tempe, AZ)

Project 1: Requirements and risk management software development
- Developed a requirements management tool to support the practice of Design, Reliability, and Manufacturability (DRM), colloquially known as Design for Six Sigma (DFSS)
- **Languages/tools used:** Cognition Cockpit, HTML, CSS, Javascript, jQuery

Project 2: Industrial statistics visualization
- Developed an interactive visualization tool in R Shiny for understanding response surfaces in industrial statistics
- **Languages/tools used:** R, R Shiny

Project 3: Healthcare Megatrends
- Developed a data analysis technique that was awarded an internal trade secret
- **Languages/tools used:** SQL, Tableau

Graduate Research Assistant
Arizona State University

February 2016 - December 2016 (Tempe, AZ)

- Recruited and trained new students
- Led development efforts for a wireless physiological sensing device to determine the likelihood of patient hospital readmission (Project Honeybee, funded by ASU Biodesign Institute)
- Developed SOP for setting up code source control software on team members' machines and best practices for code development
- Redesigned existing circuitry to meet specifications set forth in the initial project proposal
- Investigated sensor, microcontroller, and communications options to guide product development
- Developed C++ code for controlling microcontroller, interfacing with custom sensors, and writing to storage
- Reinvested $20k to improve personnel productivity
- Tested device on subjects via IRB
- Consulted relevant industry standards to guide development efforts

Circuit Design Intern
NeoLight LLC

Jan 2016 - Apr 2016 (Tempe, AZ)

- Sourced components with minimal lead times and appropriate mechanical and electrical specifications
- Developed software flow that adheres to relevant engineering standard
- Designed and built testing apparatus in LabVIEW
- Developed SOP for thermal testing of prototypes

EDUCATION

M.S., Biomedical Engineering
Arizona State University

2014 - 2016

- Master's applied project: Arrhythmia signatures with empirical mode decomposition (Advisors: Dr. Jeffrey LaBelle, Dr. Mark Spano, Dr. Heather Ross)

B.S., Neuroscience
University of California, Los Angeles

2009 - 2013

AWARDS

2018 Medtronic Beacon Award
2017 Medtronic Internal Patent #A000****
1st place, Mesa Community College Math Contest (2014)

CERTIFICATIONS

DRM/DFSS Green Belt (Medtronic, 2018)

INDEPENDENT LEARNING

Programming Languages Specialization (In Progress, Coursera)
Accelerated Computer Science Fundamentals Specialization (2022, Coursera/UIUC)
Ultimate Rust 2 - Intermediate Concepts (2022, Udemy)
Rust Fundamentals (2022, Pluralsight)
HTML, CSS, and Javascript for Web Developers (2017, Coursera)
Introduction to UI Design (2017, Coursera)
Circuits and Electronics I: Basic Circuit Analysis (2016, MIT OCW)
Discrete Mathematical Structures (2014, Mesa Community College, Grade: A)
Calculus III (2014, Mesa Community College, Grade: A)
Linear Algebra (2014, Mesa Community College, Grade: A)
Differential Equations (2013, Mesa Community College, Grade: A)

PERSONAL PROJECTS

Film Strips
History of NBA Pace
Car Temperatures in Phoenix