Prakash Kumar

CONTACT INFORMATION

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EDUCATION

University of Michigan, Ann Arbor, MI

B.S., Computer Engineering, Minor in Multidisciplinary Design Program **Sep 2016 – May 2020**

Current Cumulative GPA: 3.53

COURSEWORK

- EECS 215,216,280,281,270: Signals and Systems, Circuits, Data Structures and Algorithms, Digital Logic Design.
- PAT 201/202: Introduction to Computer Music/Audio. Training at the Duderstadt Audio Studio.
- Next Semester: EECS 352, 373: Digital Signal Processing, Embedded Systems

PROFESSIONAL EXPERIENCE

Radiation Oncology Flat Panel Imager Group, Ann Arbor, MI

Research Assistant, Electronics Lab **Jan 2018 – Dec 2018**

- Wrote Systemverilog to program FPGA boards to interface with poly-silicon flat panel X-ray arrays, using UART and SPI communications to help aid research team in debugging X-ray communications
- Soldered components onto the lab's custom boards, and tested functionality using multimeters and oscilliscopes

Multidisciplinary Design Program, MAESTRO, Ann Arbor, MI

Algorithms Subteam **Jan 2018 – Dec 2018**

- Designed signal processing algorithms to interpret music conducting gestures using an Inertial Measurement Unit, acceleration and gyroscope data.
- Used Matlab and Python/Pandas to write real-time data analysis and transforms on sampled data to provide audio feedback to conducting students at the School of Music

Robotics Toolkit Workshop, Ann Arbor, MI

Pilot Student **Sep 2017 – Dec 2017**

- Design, built, and tested an autonomous line-following robot using a beaglebone, IMUs, a custom line-sensing PCB module, and motors as a pilot student testing new program for graduate students.

HealthPals, San Francisco Bay Area, CA

Software Engineering Intern **May 2017 – August 2017**

- Full Stack liaison between the frontend and backend engineering teams in the development of the CLINT product(developed in python and react.js), designed to give value based decisions to clinicians at the point of care.
- Analyzed several thousand anonymous patient records while providing useful insights on patients' risk for cardiovascular disease by writing a Population Dashboard using javascript, python/pandas, and seaborn.

Internet of Things Home Automation, Northville, MI

Side Project **Aug 2015 – Jun 2017**

- Developed a RESTful API for my personal garage using Twilio, Node.js and a Raspberry Pi that controlled the garage via web application, text message or android application for easy access to the house.

LEADERSHIP

Music Director of Maize Mirchi A Cappella, a South Asian interest a cappella group on campus. President of the Bursley Hall Council, managed funds, sponsored local organizations and led community events for the benefit of residents.

SKILLS

Languages: SystemVerilog, Python, Javascript, CSS, C, C++, C#, Unity, Bash, LaTeX, Java, Swift
Other Technology: Arduino, Raspberry Pi, Soldering, DipTrace(PCB Design), Redis, SQL, MongoDB, Vivado, Circuit Analysis, MultiSim, Oscilliscopes, Logic Pro X, Ableton Live, Max MSP