

Babak Kiaie

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CAREER EXPERIENCE

Microvention

Engineer II (September 2021 – Present)

Responsible for creating and improving production processes for a leading endovascular surgical device.

- Leading development for web applications to improve workflow processes
- Led process validation project for a new embolic coil with pusher, managing deliverables and timelines.
- Authored manufacturing procedures and protocols, supervised validation, and trained production operators.
- Collaborated with R&D, planning, and marketing teams, driving effective communication and project success

Applied Medical

Process Development Engineer (June 2019 – September 2021)

Responsible for analyzing, improving, and developing manufacturing processes for electrosurgical medical devices.

Web Development

Developed a tool life tracking web app that allows engineers to track and compare the capability of machining end mills on each component within each medical device product line in order to reduce net machining costs.

- Developed frontend using **React** JS hooks, **state management**, and react routes to immediately update components and display tooling data as it is logged.
- Structured backend server in Node JS to interface with **MongoDB** product database to store/retrieve user logged data from the front-end post/get requests.
- Designed MongoDB document schema with multi-nested subdocuments to allow for the storage and retrieval of tool life data for each product line and its respective subcomponents.

Apple Inc.

Genius - Senior Technician July 2015 - May 2019

- Led personalized trainings that taught customers how to use their Apple Devices in a way that fosters creativity and maximizes productivity.
- Triage customer devices to assess whether hardware or software solutions were appropriate for the customers needs
- Performed hardware repairs on apple consumer devices

Permoco Molds

CNC Programmer & Machinist - June 2014 - November 2016

- Developed and updated CNC machining programs via MasterCam to perform high precision milling operations
- Designed 3D models for components and features of plastic injection and diecast molds
- Performed hardware repairs on apple consumer devices.
- Built and maintained company website

Engineering Certifications

- Meta Professional Front End Developer
- SolidWorks Mechanical Design Associate
- Sigma Green Belt

Programming Languages:

- JavaScript ★★★
- Swift ★★★
- Python ★★☆☆
- C++ ★☆☆☆
- Java ★☆☆☆

Web Development:

- React.js
- HTML
- CSS
- React-Bootstrap
- Redux
- Node.js
- Express.js
- REST API

Mobile Development:

- iOS
- UIKit

Design Platforms:

- Figma (UI/UX Design)
- SolidWorks (3D product design)
- Adobe Photoshop

PROJECTS

Workout Volume Tracker (iOS / React.js)

React - (<https://github.com/bobbykiaie/training-volume>)

iOS - (<https://github.com/bobbykiaie/training-volume>)

- Crafted a mobile-responsive workout tracking app for both web and iOS platforms.
- Utilized React, Material-UI, and Context API for seamless web functionality.
- Designed iOS app with Swift UIKit using a programmatic UI, without the need for a storyboard.
- Implemented UI/UX design principles using Figma for an intuitive user interface.
- Integrated Firebase Firestore for robust, scalable user and workout data storage.
- Secured user data with Firebase Authentication for reliable access management.

Dynamic Solar Tracking System

- Designed, Programmed, and built a Solar tracking system using SolidWorks and the Arduino Platform.
- The system consisted of a solar panel in combination with a series of photo resistors and a linear actuator motor.
- The program dynamically adjusts the position of the solar panel throughout the day based on the resistance of the photo resistors to obtain the maximum amount of solar energy.

EDUCATION

California Polytechnic University of Pomona (May 2019) Bachelor of Science in Manufacturing Engineering