

Andrew Kirkby

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Profile

Full-stack software engineer with experience in creating modern, responsive user interfaces intended for various end users and devices. Experience writing microservices to query & aggregate data across various datastores before returning it to the front end via an API. Also have experience with automation and control of multi axis robots.

Excels in fast-paced environments with strong cross-team communication skills. Highly proficient in writing clean, efficient, and understandable code, with a passion for collaborative project work. Demonstrates exceptional initiative and capability to independently complete comprehensive projects, including database, backend, REST, and interface development, with speed and efficiency.

Mentored several interns who transitioned to full-time roles, finding it highly rewarding to see their growth and success. Continued to mentor peers, emphasizing the importance of ongoing learning and collaboration. Committed to listening to and learning from colleagues at all levels to enhance project outcomes and contribute to personal and professional development as a well-rounded and respected engineer.

Education

Western New England University (WNE), Springfield, MA

**Bachelor of Science in Mechanical Engineering
Mechatronics Concentration**

May 2019

Employment

Software Engineer

August 2021 - Present

Protodyne Corporation, Bloomfield CT

- Developed more than half a dozen full stack projects as the lead and solo developer Backend (Java 16, SpringBoot 2.5.4), REST, User Interface (Angular 16), DB integration
- Rapidly develop prototype services/interfaces to show management and quickly make changes based on feedback
- Monitoring for new industry standards & libraries to ensure the company is being as efficient as possible
- Be a mentor for associates and newest employees, ensuring they have a smooth integration and have the support they need

Associate Software Engineer

May 2019 - August 2021

Protodyne Corporation, Windsor CT

- Design/Develop several SpringBoot (Java 8) services to query and modify data stored in MongoDB and MySQL
- Upgrade web interfaces from AngularJS to leverage newer version of Angular(v13)
- Lead SW Engineer on AMR (Autonomous Mobile Robot) project, integrating third party AMR with our internal services via REST.

Software Technician

August 2018 - May 2019

(Worked 30+ hours a week while full time student)

Protodyne Corporation, Windsor CT

- Continuous full stack development for new features and bug fixes on both new and legacy products
- 24/7 Support for dozens of large scale production devices in the field if customer care was unable to solve problem
- Develop several simple Spring Boot (v2.x) microservices to perform queries and fetch data from MongoDB

Paid Software Intern

May 2017 - August 2018

(Also part time during school year)

Protodyne Corporation, Windsor CT

- Research/Experiment with modern technologies the team was considering adding to our stack
- Develop web based user interface for products using HTML/CSS/AngularJS

Projects

Web User Interfaces (Protedyne)

2017 - Present

Task: Identified inconsistency and outdated frameworks across multiple user interfaces. Proposed and implemented modular Angular (v16) libraries to streamline code, enhance design consistency, and unify user experience across all interfaces.

- Programmed modularized Angular libraries that are consumed by downstream interfaces. The downstream interface would contain only the unique code needed to run it.
- Integrated with Microsoft Azure Single Sign-on for a smoother experience for users
- Leverage modern libraries such as Materials for new products, as well as create unit tests for components/services/etc.

Help Service (Protedyne)

2018 - Present

Task: Designed a centralized documentation service at Protedyne for managing and maintaining system information. The service required multi-layered, access-level based content organization (similar to a tree structure) and support for diverse media formats (text, images, videos). Additionally, integrated a user-friendly help feature directly into the system's UI for quick, intuitive access to documentation across various platforms.

- Leveraged several MongoDB collections to house the data & tree.
- Spring Boot REST API (Java 16) to query & save the data via a dedicated web interface
- Angular (16) library containing component & service for easy embedding of help inside existing UIs
- Used Azure access levels to filter data returned from DB to ensure the correct data was shown to the proper user

Build Cell Test Suite (Protedyne)

2023 - Present

Task: Developed an interface and service solution for Protedyne to support the rapid deployment of a new product line, involving thousands of devices. Created a system for build technicians to efficiently construct and test devices before shipment.

- Saw need for project prior to management asking, wrote documentation/a presentation to pitch concept to management and got project approved
- Designed an easily scalable architecture that fit all unique steps in the build workflow into one simple and intuitive interface (Angular 16)
- Wrote backend that acquired more and more tasks each day as the rest of the company saw the power & potential in the service. (Java 16, Spring 2.5.4)
- The service is becoming the backbone to the build process

BrightLife (Personal IoT Smart Home Project)

2023

Task: Designed a smart home ecosystem centered on pet care, utilizing modern technologies and readily available components to enhance functionality and convenience.

- Design and develop IoT devices that leverage BalenaOS (Docker on Raspberry Pis)
- Leverage Firebase for authentication of users, hosting interface, Firebase functions to purge expired states
- Integrate with GoogleCloud Pub/Sub for sending/receiving messages with devices
- Create sleek interface/IOS app for users to register/control their devices
- CAD (computer aided design) and print parts to create the devices/housing

Computer Skills

HTML5	Angular/Materials (v13,16)	Java (v8, 16)	Spring(2.5.4)
Azure	JS/TS	Firebase/GoogleCloud	AWS
CSS/SCSS	NodeJS (v20)	Docker	MongoDB
REST	MQTT	Python(3.7)	SQL

(All skills listed above have been used in a professional setting within last 3 years)

Awards

WNE Best Innovative and Creative Design in a Senior Project
LabCorp IT Leadership Award

2019
2023