Robert Brownstein

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Experience

Boston Dynamics | Software Engineer   **(2022 - Present)**
- Built major features for Orbit, our mission scheduling and teleoperation solution for Spot, the quadrupedal industrial inspection robot. Notable feature work included real-time robot monitoring, map editing, mission editing, and teleoperation improvements. TypeScript frontend (React, Three.js), and mixture of TypeScript and C++ on the backend. Protobuf everywhere.
- Built robot-side features relating to networking, API connectivity, and maintenance in TypeScript / Python.

Better | Senior Software Engineer   **(2019 - 2022)**
- Built real estate service in a compact time period and assisted in growing the associated team.
- Improved core workflow engine and a variety of API integrations with our many external partners.
- Introduced GraphQL into our core product, and built automatic type converters to automatically generate and sync types from TypeScript.
- Various UI work with React, Webpack, Rollup.

Social Tables (now Cvent) | Engineer -> Engineering Manager -> Lead Engineer   **(2016 - 2019)**
- Lead development of layout automation API and novel algorithm, wrote a good chunk of the authentication and permissions infrastructure, created external developer portal, prototyped a 3D scan to floorplan converter, and wrote the majority of an internal floorplan authoring tool in my spare time that became a major success.
- Managed a team of 4 engineers that built and released multiple products, including a data-intensive user dashboard and an internal floorplan authoring tool (partially released open-source as [OpenFPC](#)).
- Resumed work as an IC in order to work on challenging front-end engineering problems in Diagram, the company's flagship in-browser CAD product. Built advanced template management, section management, 3D preview capabilities and optimized core 2D rendering engine.

Hinge | Backend Engineer   **(2015)**
- Maintained and improved a Python based service layer powering a mobile app with 0.5M DAU.
- Introduced CI into development workflow, and lead efforts to produce testable code.
- Tackled scaling challenges while modernizing a legacy codebase and DB schema with over a 1B records.

Earlier roles are omitted to save space.

Education

BS in Computer Science - University of Maryland, College Park   **(2014)**

Skills

- **Major languages:** JavaScript / TypeScript, Python, C++.
- **Favorite Libraries:** React, Redux, Three.js, Express, Flask, Protobuf.
- **Build and Deployment Systems:** Bazel, Webpack, Rollup.
- **Other Tooling:** Docker, AWS, Postgres, RethinkDB, ElasticSearch.

Notable Projects

Developing a web-based programming-focused 2D platformer in my spare time.