

Shivang Naik

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Senior Software Engineer with over a decade of experience building and shipping complex systems from scratch across backend and frontend. Strong background in manufacturing and factory software, real-time data pipelines, backend infrastructure, and computational geometry, with a focus on real-world, hardware-adjacent problems. Proven ability to operate with high ownership in early-stage environments, comfortable working alongside hardware on the factory floor and delivering end-to-end solutions from core algorithms and data pipelines to production services and internal tools.

WORK EXPERIENCE

Hadrian

Aug. 2023 – March 2026

Senior Software Engineer

Torrance, CA

- Developed a Design for Manufacturing (DFM) platform enabling manufacturing engineers to analyze part geometry and assess factory capabilities early in the design process, reducing downstream production risk
- Implemented a model-based definition (MBD) tool allowing CMM programmers to accurately select and inspect dimensional features directly from a 3D model, eliminating ambiguity from 2D drawings
- Designed computational geometry algorithms to validate complex part features including holes, chamfers, fillets, and surfaces, ensuring manufacturability and compliance with factory constraints
- Built backend services and APIs to assess and track manufacturability capabilities, integrating core factory systems and machine-learning pipelines using Go, Python, and TypeScript
- Developed a web-based tool-tracking interface giving production teams factory-wide, real-time visibility into tool availability and ensuring correct tooling selection for each manufacturing job
- Aided in the redesign of the DFM web application to improve accessibility, scalability, and extensibility, supporting broader adoption and future platform growth

Resolve

March 2021 – Aug. 2023

Software Engineer

Remote

- Maintained multiple web services including a REST API used by the application clients and a real-time connection server using WebSockets to connect multiple users in the company's virtual reality application
- Implemented new UI/UX features including annotation support, peer reviews, and bookmarks for a React web application to supplement customers using the virtual reality application
- Added a two-way sync service to retrieve and update BIM 360 issues and display the changes in the web UI in real-time using server-sent events
- Ensured multi-cloud support by migrating data and cloud services including object storage, queues, and databases to Azure using Terraform and the Serverless Framework
- Enhanced UI/UX design in Unity for a VR application, optimizing the main menu to display user projects and enabling interactive viewing of object attributes
- Developed a billing and subscription service around Stripe to onboard new customers to the platform

Convene

Oct. 2018 – Oct. 2020

Software Engineer

New York, NY

- Architected a service-oriented backend utilizing AWS, Salesforce and third-party APIs for a consumer facing application, the most vital project for the company at the time
- Implemented web services in NodeJS that ranged from onboarding new users, emailing members for various marketing campaigns and payment automation

- Developed a REST API used by web and mobile applications to provide customers with a gateway into services offered by Convene including room booking, event planning, and visitor management
- Redesigned UI for room booking web application used by all prospective customers

Paperspace

June 2015 – Oct. 2018

Software Engineer

New York, NY

- Prototyped and developed original Paperspace concept used for admission into Y Combinator W2015
- Spearheaded the design and development of a Windows software agent to capture and encode H.264 video data from a server using the NVIDIA Capture API
- Built a near real-time, low-latency streaming pipeline delivering encoded audio and video to a client application and processing mouse and keyboard input events through a WebSocket server written in C#
- Developed a React web application that served as the point of entry for users to access core product offerings including a portal for virtual machine access and uploading files to train machine learning models
- Maintained a REST API to connect to client applications and allow other developers to integrate Paperspace products into their own workflows or applications
- Implemented a server application in Go to allow users to manage Docker images
- Ensured servers were functional and performing as required using configuration management tools and building a logging solution in-house
- Utilized the Opus codec to encode and decode audio data for playback in the client application for an enhanced end-user experience

Bauer Controls

Oct. 2013 – May 2015

Systems Programmer

Plymouth, MI

- Developed data-acquisition and test software for General Motors electric-battery assembly lines, digitizing test procedure records on the production floor
- Implemented a test-data collection and analysis application used by field engineers on the assembly line

RELEVANT EXPERIENCE

Clockwork Labs

Aug. 2020 – Sept. 2020

Freelance

Remote

- Wrote Unity scripts in C# for features including overlaying mini-map icons and player resource gathering
- Updated player resource gathering interactions to include inventory equipment

EDUCATION

University of Michigan

May, 2014

B.S. Aerospace Engineering, Computer Engineering

Ann Arbor, MI

- Member of several student engineering teams including Solar Car and CubeSat

TECHNICAL PROFICIENCIES

- **Operating Systems:** Windows, Linux
- **Languages:** Python, Go, TypeScript, JavaScript, C, C++, C#, Rust, HTML/CSS
- **Databases:** PostgreSQL, Redis, MongoDB, SQLite
- **Technologies/Frameworks:** REST, WebSocket, gRPC, Node.js, Express.js, React, Next.js, GraphQL, AWS, Azure, Docker, Kubernetes, Terraform, .NET, Unity, Three.js, Git, CircleCI, Jenkins, Salesforce, Swagger, Electron, TS-REST, FastAPI, TanStack Query, Kafka, GitHub Actions, Argo CD, Serverless Framework