Jason Mandel

914 ~ 417 ~ 5472
jmandel1027@gmail.com

Education

Bach. Sci in Visual Arts & Mathematics.
School of Art + Design, Purchase College 2013 - 2018

Experience

Technical Lead, 1build, April '21 ~ Current

~ Architected & lead development on a distributed, event driven data processing pipeline with **Golang**, **Kafka** and **Pachyderm** to consume and normalize construction material, labor and fixture across the country into **Postgres**. Periodically processing 100s of GBs of data in production, reaching a throughput of ~17,000 messages per second.

~ Architected & lead development on a web based construction takeoff tool that loads localized, real time data on material, labor and fixture pricing from across the contry with **Golang**, **GraphQL**, **gRPC**, **PostGIS**. Connecting the dots between complex geometric representations on plans and blueprints, to line items in the Estimate & Takeoff UI. Coordinating across engineering, product and design functions on many continuous iterations.

~ Collaborated with CEO to develop a framework and criteria for hiring a Head of Engineering.

~ Lead development on a migration from hand spun k8s clusters & AWS infra to a durable foundation leveraging **Terraform**, Infrastructure as Code & **Flux** as GitOps. Modularizing and fortifying table stakes infra for the engineering, Marketplace & Product organizations.

Software Engineer, 1build, July '20 ~ March '21

~ Architected & lead development on a Payment gateway that handles millions of dollars in annualized revenue powered by **Stripe** & **Golang**.

~ Architected & lead development on a dirstributed File Ingestion system that can break down customer PDF's at high scale, system could quickly churn through PDFs as large as 12 gbs and generate thumbnails, **OCR**, and relational data with high throughput powered by **Golang**, **Kafka** & **Pachyderm**.

~ Worked in tight formation with Operations & Marketplace teams to facilitate the expanding needs of a remote fleet of on demand cost estimators, often debugging situations in real time with customers.

~ Collaborated with Data, Marketplace & Operations team to implement an "estimator matching" algorithm that matches customers projects with the estimators who are best suited to work in it.

Software Engineer, Toggle Industries, Sept '19 ~ May '20

~ Architected geometry extraction pipeline for Robotic Work Cell with **Go**, **GraphQL**, **OCR**, **PostGIS**, **GDAL**.

~ Implemented cloud migrations for on premises systems at facilities with **Terraform**, **Bash**, **AWS** and **Azure**.

~ Architected **Frontend** and **Backend** systems to interface with inventory mgmt systems, extract and annotate geometries for robotic cell with **React**, **Typescript**, **Go**, **Node**, **Webpack**, **WebGL**, **Docker** and more.

~ Crafted DevOps Pipleines with **Terraform**, **CircleCI**, **Docker**, **Bash**, **Go**, **Node**, **AWS**, **Azure** and more.

~ Built integrations for **ABB IRB-6700** Robot arms, APIs and factory systems with **Go**, **ROS**, **gRPC**, **AWS Greengrass** and **NVIDIA Jetson**.

Software Engineer (Contract), Kaleidoscope Labs, June '19 ~ Sept '19

~ Built reporting pipelines for third party fulfillment centers with **Go**, **Node**, **Typescript**, **AWS Lambda**.

~ Built reporting dashboards with **Typescript**, **React**, **Node**, **Webpack**, **Docker**, and **Styled Components**.

~ Oversaw day to day management of **Shopify** e-commerce platform.

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Experience Continued

Software Engineer, Numina, June '18 ~ April '19

~ Architected a Sensor Installation app with **React Native**, **Typescript**, **AWS Lambda**, **Node**.

~ Implemented various reporting utilities onboard embedded sensors with **Python**, **InfluxDB**, and **Athena**.

~ Broke down a monolithic **Flask** app into **microservices** with **Python**, **Go**, **PostGIS**, **Node**, **AWS Lambda**.

~ Built a **API Gateway** to talk to various microservices with **Python**, **GraphQL**, and **AWS Lambda**.

~ Built reporting and sensor management dashboards with **React**, **Typescript**, **Webpack**, **WebGL**, **Docker**, **NGINX**, **AWS EC2**, and **CircleCI** among others

Software Engineer (Contract), FOAM, March '18 ~ June '18

~ Built simulations to demonstrate network capabilities and generate data with **Python**, **Jupyter Notebooks**.

~ Built **Frontend** marketing site to demonstrate capabilities and visualize network with **React**, and **WebGL.**

~ Built **Frontend** component library with **React**, **Webpack**, **Styled Components** and more.

~ Built **Frontend** application for **Web3** product to curate registries of POI data with **React**, **Metamask**, **Typescript**, and **Deck.GL**

Research Assistant, Parsons Urban Systems Lab, Jan '18 ~ June '18

~ Participated in the NSF funded Urban Resilience to Extremes Sustainability Research Network (UREx).

~ Built tools to super-impose datasets via a **Spatial Join** with **Python**, **PostGIS**, **GDAL**, and **OGR2OGR**.

~ Built **Frontend** app to visualize Socio, Eco, and Infra datasets for cities with **React**, **Deck.GL** and more.

~ Built a data warehousing solution for static GIS tilesets with **AWS S3**

Teacher & Admin Assistant, Rye Arts Center, Mar '16 ~ Jan '18

~ Taught Creative Coding and Game Design classes with **Processing** for kids ages 10 - 14.

~ Taught instrument design classes with **Arduino** & **Processing** for Kids aged 12 - 15.

~ Collaborated with Board of Directors on Activity Programming and fundraising strategy.

References

Michael Branch,
Technical Advisor, Toggle
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Dr. Ilan Goodman
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Uluc Aydin
Head of Engineering, 1build
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