

# Spencer Sullivan

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**SUMMARY** Software / Data / Machine Learning Engineer with 7+ years of experience in building business-critical applications that rely heavily on data and modeling. Currently helping ScaleFactor to automate accounting for small businesses.

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**IDEAL JOB** I am looking for opportunities in the San Diego area (or remote) where I can significantly impact the business, work closely with researchers / data scientists to develop, productionize, and scale models, and continually learn and grow as an engineer.

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**KEY SKILLS** **Platforms:** Amazon Web Services (AWS), Google Cloud, On-Premise Cluster  
**Programming Languages:** Ruby (Rails), Python, Go, SQL, HTML, JS (Ember)  
**Databases:** Snowflake, Presto, Athena, Redshift, Postgres, Redis, Dynamo  
**Data Tools & Frameworks:** Airflow, Luigi, Glue, Hive, Spark, Kafka / Kinesis  
**Other:** Docker, Git, Kubernetes, DataDog, Tableau, Lambda, SQS

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**CAREER**

<b>Senior Software Engineer</b> <i>ScaleFactor, Remote</i> Automating small-business accounting with full-stack web development and ML pipelining.	2019 - Present
<b>Senior Software Engineer</b> <i>Spiceworks, Austin</i> Architected and developed Petabyte-scale data pipelines feeding ML models.	2017 - 2019
<b>Software Engineer</b> <i>Spiceworks, Austin</i> Wrote business-critical, high-volume, low-latency systems, mostly in Golang.	2014 - 2017
<b>Software Development Intern</b> <i>Spiceworks, Austin</i> Learned how to work in agile teams and translate business requirements to code.	2010 - 2014

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**EDUCATION** **BS in Computer Science, University of Texas at Austin** 2011 - 2014

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**EXPERIENCE****ML for Bookkeeping** *An ML workflow for automatically classifying bank transactions*

- Reduced need for humans to classify transactions manually
- Refined frontend, backend, and modeling code for production use
- Analyzed model performance

**Accounting Report Card** *Self-service health summary dashboard of business accounting books*

- Integrated with 3rd parties to collect and parse accounting reports
- Ran analysis to determine healthy accounting patterns
- Created portal for calculating and viewing insights

**Real Time Bidder** *Set of services for intelligently bidding on ad inventory*

- Wrote services that respond in under 10ms (including network latency)
- Horizontally scaled web server up to 1 billion requests per day
- Designed micro-service architecture comprising 10+ services
- Productionized machine learning model to compute bids
- Helped scale product from \$0 to ~\$10M in annual revenue
- Rigorously tested and wrote monitoring

**Business Identity Graph** *Database of companies who visited Spiceworks*

- Generated graph from millions of data points from several sources
- Designed data model where graph was iteratively updated in-place
- Resolved business attributes from a connected component of the graph

**Account Intelligence** *Dashboard showing businesses and their interests*

- Wrote data pipeline to calculate purchase intent of businesses
- Integrated Tensorflow model from data science team into pipeline
- Architected pipeline to leverage business identity graph

**Pixel Tracking** *Web-tracking service integrated with 100's of companies*

- Led rewrite of service
- Integrated open-source browser fingerprinting

**Segmentation service** *Puts people into segments based on their actions*

- Wrote jobs to send billions of events into system every month
  - Integrated with 3rd parties using cookie matching
  - Debugged / resolved problems around user-identity mappings
  - Collaborated with Data Science to incorporate intent modeling
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