

# Andrew C. Jensen

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## Work Experience

### 2022-Present **Amazon.com**

#### **Selling Partner Experience**, Software Engineer

*On-site: Arlington, VA / Remote: Chicago, IL • AWS, Java, Typescript, Python*

- Designed and released the new Amazon Seller Forums, a place for sellers to find answers and collaborate.
- Implemented features end-to-end, including: user tagging, pinning posts, personalized post recommendations, global data replication, post quoting, moderation flagging, and searching and sorting of posts.
- Provided system design and operations support across backend, frontend, and ETL pipelines.
- Made the website adaptive to provide an optimal experience on all devices from mobile to desktop.
- Optimized website performance and SEO by migrating the website to server-side rendering.
- Created a tool which identifies themes across Amazon Seller Forums via unsupervised topic modeling, and summarizes the posts in each theme with an LLM.

### 2017-2022 **Caterpillar, Inc.**

#### **Engine Control and Simulation**, Software Engineer

*Peoria, IL • Python, Tensorflow, Matlab/Simulink*

- Designed self-optimizing embedded software controls for internal combustion engines.
- Established an engine simulation and optimization library which has been adopted by 4+ applications.
- Created a library which calculates derived parameters from engine performance data.
- Led a small team to create an engine simulation web app used daily by 30+ engineers.
- Invented a novel engine control system (Patent US20220297693A1).

#### **Engine Calibration**, Software Engineer

*Peoria, IL • Python, SQL*

- Optimized and released 7 engine softwares to production.
- Applied machine learning to simulate engine performance and optimize software parameters.
- Created engine software parameter optimization tool and used it to calibrate 3 production engines.
- Reduced lab equipment failures 90% by integrating 5 data sources into a predictive maintenance dashboard.

#### **Rotational Program**, Engineer

*Peoria, IL • Python, SQL, Matlab/Simulink*

- Led a team to design and deploy an internal career development app used by 500+ employees.
- Developed dashboards and pipelines to help engineers monitor their machine designs in production.
- Designed and tested two control algorithms for articulated dump trucks (Patent US11208097B2).
- Strengthened new employee engagement by hosting a quarterly conference for 100+ employees.

## Education

### 2013-2017 **B.S. Mechanical Engineering**, GPA: 3.9/4.0

*University of Illinois, Urbana-Champaign*

- Key courses: Control Systems, Robotics, Dynamical Systems, Fluid Dynamics

### 2015, 2016 **Caterpillar, Inc.**, Software Engineer Internships

- Saved an estimated \$1 million per year by optimizing Caterpillar's GPS data processing algorithm.
- Developed an application used by 20+ engineers to help them manage engine performance data.

## About me

*Very familiar:* Java, Typescript, Python, SQL, DynamoDB, OpenSearch, Lambda

*Fairly familiar:* Scala, SageMaker, Glue, Redshift, Neptune

*Projects:* breathe.acjensen.com – a meditation guide with live visitor count

*Hobbies:* Professional drumming, learning musical instruments, biking in the city