

# Andrew C Jensen

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## Work Experience

- 2022-now

**Amazon – Seller Experience**

Software Engineer

Arlington, VA   *Java, Typescript, NextJS, AWS*

Engineer for the Amazon Seller Experience team. I designed and launched the new Amazon Seller Forums, a place for sellers to find answers and collaborate. I implemented backend and frontend features, including user tagging, personalized recommendations, content pinning, post quoting, and moderation flagging. I optimized website performance and SEO by migrating the website to server-side rendering, and created an optimal experience on all devices from mobile to desktop by making the website adaptive. During this time, I also created a tool that identifies common issues Amazon Sellers are posting about via unsupervised topic modeling and LLM summarization.
- 2020-2022

**Caterpillar – Engine Control and Simulation**

Software Engineer

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

I primarily designed embedded software control systems for internal combustion engines. I worked to increase efficiency of the design process by creating a python-based simulation/optimization program. The program runs a standard set of simulations and verifies key performance metrics. I then led a small team to create a simulation web app used daily by 30+ engineers. During this time, I also invented a novel engine control system (Patent US20220297693A1).
- 2018-2020

**Caterpillar – Engine Calibration**

Software Engineer

Peoria, IL   *Python, SQL*

I primarily optimized embedded software control systems for internal combustion engines. I used machine learning to simulate engine performance and optimize software parameters before deploying the software to a real engine. I also created an engine software parameter optimization tool and used it to calibrate three production engines. During this time, I also reduced lab equipment failures 90% by integrating five data sources into a predictive maintenance dashboard.
- 2017-2018

**Caterpillar – Rotational Development Program**

Engineer

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

Rotated between multiple assignments of different engineering disciplines including machine control software design, testing, and dashboarding/analytics. I patented a control algorithm for articulated dump trucks (Patent US11208097B2). I also created dashboards and data pipelines to help engineers monitor machines in production. During this time, I led a team to design and deploy an internal career development app used by 500+ employees.

## Education

- 2013-2017

**Mechanical Engineering, B.S.**

GPA: 3.9/4.0

University of Illinois, Urbana-Champaign

*Key courses: Control Systems, Robotics, Dynamical Systems, Fluid Dynamics*
- 2015, 2016

**Caterpillar – Internships**

Saved ~\$1 million per year by optimizing Caterpillar's GPS data processing algorithm. Contributed to an internal data management application.

## About me

*Skills:* Java, Kotlin, Python, Typescript/Javascript, React/Redux/NextJS, SQL, OpenSearch, Neptune, Glue, SageMaker  
*Projects:* breathe.acjensen.com – a breathing meditation guide with live visitor count  
*Hobbies:* Drums, piano, biking