Andrew C. Jensen

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Work Experience

2022-Present

Amazon – Selling Partner Experience, Software Engineer
Chicago, IL · AWS, Java, Typescript, Python

- Engineer for the Amazon Seller Forums, a place for sellers to find answers and collaborate with other sellers.
- Designed and released the new Seller Forums on AWS, and helped migrate data and traffic from the old forums.
- Implemented features end-to-end, including: user tagging, pinning posts, personalized post recommendations, global data replication, post quoting, moderation flagging, and sorting posts by latest activity.
- 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 page load times and search engine indexing by migrating the website to server-side rendering.
- Won the division hackathon by engineering a tool which identifies themes across Amazon Seller Forums via unsupervised topic modeling, and summarizes the posts in each theme with an LLM.

2020-2022

Caterpillar – 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 simulated or measured 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).

2018-2020

Caterpillar – Engine Calibration, Software Engineer
Peoria, IL · Python, SQL

- Optimized and released 7 engine softwares to production.
- Applied machine learning to simulate engine system performance and optimize engine control 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.

2017-2018

Caterpillar – Rotational Program, Engineer
Peoria, IL · Python, SQL, Matlab/Simulink

- Led a team to design and deploy an internal career development app used by over 500 employees to date.
- Strengthened new employee engagement by initiating and leading in-person quarterly meetings for 100+ people.
- Developed dashboards and ETL pipelines to help engineers evaluate diesel engine performance in production.
- Designed and tested two control algorithms for articulated dump trucks (Patent US11208097B2).

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

2016

Caterpillar, Software Engineer Intern
Developed an application used by 20+ engineers to help them manage engine performance data.

2015

Caterpillar, Software Engineer Intern
Saved an estimated $1 million per year by optimizing Caterpillar's GPS data processing algorithm.

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