

# WESNER MOISE

Innovator in Artificial Intelligence and Productivity Software

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-  [wesnermoise.com](http://wesnermoise.com)
-  [github.com/wesnerm](https://github.com/wesnerm)

Consummate software developer with degrees in technology entrepreneurship, computer science, and artificial intelligence. Primary domains in artificial intelligence, real-time data-intensive applications, productivity applications, layout engines, and automated code analysis. Proficient in web, backend, mobile, desktop, devops, software engineering, and deep learning. Strong in algorithms, performance engineering, and technical sophisticated projects. Ranked top 1% in competitive programming.

## WORK EXPERIENCE

### Adroit Trading Technologies

Senior Engineer and Backend Architect | 2024

Overhauled the frontend and backend of a trading platform to improve performance and reduce latency.

- Redesigned datagrid frontend to refresh, sort and filter data in real-time from 10 seconds.
- Prototype solutions to move frontend from server-side ASP.NET Blazor to React and Webassembly.
- Redesigned backend to supply real-time market data efficiently, support more clients, and prevent memory leaks from slow consumers.

### mParticle

Staff Software Engineer | 2019 - 2023

Lead effort to analyze and reengineer compute and storage resources to eliminates millions of dollars in AWS expenses.

- Investigated the replacement of SQS infrastructure serving petabytes of data per month with Apache Kafka.
- Lead backend development of data planning to validate and transform events.
- Created open-sourced JSON Schema validation library that reduced memory and time requirements by a factor of 30.
- Developed first end-to-end testing framework, documented the entire backend architecture, and lead the operational excellence team.

### Adobe

Software Engineer, Magento BI | 2018

Delivered backend performance improvements for Magento BI, a data analytics platform for e-commerce.

- Improved performance of data pipeline by an order-of-magnitude and reduced memory usage.
- Modernized microservices and automated manual operations and service recovery.

### SoftPerson

CTO | 2004 - 2017

Designed productivity applications using symbolic, generative AI.

- Developed a business plan that was a New Venture Championship national business plan competition finalist(2002).
- Designed the layout engine and natural language engine for the Pensa wordprocessor, which can rewrite and predict sentences.
- Developed a futuristic code editor and static source code analyzer NStatic using automated theorem proving.

### Microsoft Corporation

Software Design Engineer, Natural Language Research Group | 2003

Developed background spell-checking for WPF text layout control.

Software Design Engineer, Microsoft Excel | 1994 - 2000

Developed PivotTables and various other Data Access features in Microsoft Excel.

- Enhanced PivotTables with outline layout, PivotCharts, calculated formulas, AutoSort/Filter, and OLAP data access.
- Granted US Patent #6626959 and presented four times at Microsoft conferences.

## EDUCATION

### University of Texas at Austin, Dept of Computer Science

Austin, TX

MS, Artificial Intelligence - GPA: 4.0

### UCLA Anderson School of Business

Los Angeles, CA

MBA, Technology Entrepreneurship. Dean's Fellowship.

### Harvard College

Cambridge, MA

BA, Applied Mathematics and Computer Science.

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## SKILLS

### Backend Development

- Cloud (AWS, GCP, Azure)
- Microservices and Web APIs
- Data-Intensive Applications
- DevOps

### Artificial Intelligence

- Machine Learning
- Reinforcement Learning
- Software Verification
- Automated Theorem Proving
- Advanced Algorithms

### Web Development

- React / NextJS
- ASP.NET Blazor
- AngularJS
- Jamstack

### Deep Learning

- PyTorch / TensorFlow / Keras
- Natural Language Processing
- Generative Models
- Computer Vision
- LLM Ops

### Platform Development

- iOS (Objective C)
- Android
- React Native
- WPF/WinForms/Win32

### Languages

- C# / .NET Core
- C/C++
- Javascript / Typescript / Node
- Python
- Java
- Go

## PROJECTS

### Document Layout Engine

- Natural Language Wordprocessors
- Integrated Development Editors
- Diagram Layout

### Static Analysis Engine

- Code Compilation and Analysis
- Code Contracts and Bug Detection
- Integrated Development Editor

### Spreadsheet Data Access

- PivotTable Layout Engine
- Web, OLAP, and Databases Queries

### Realtime Dashboards

- Realtime Chart Dashboards
- Realtime Data Grids for Trading
- Low Latency Streaming

### Performance Engineering

- Operational Excellence Standards
- Monitoring and Metrics
- S3 Compression

### Consumer Data Processing

- Data Quality Processing
- Kafka Messaging Infrastructure
- High-volume Low-latency Processing

## HONORS

### Amazon Web Services

<https://www.credly.com/users/wesner-moise/badges>

- Certified Solution Architect Professional
- Certified DevOps Engineer Professional

### HackerRank competitive programming

[https://www.hackerrank.com/leaderboard?filter=wesnerm&filter\\_on=hacker](https://www.hackerrank.com/leaderboard?filter=wesnerm&filter_on=hacker).

- 5th in US and 27th in the world (99th %ile).

### Google Cloud Platform

<https://www.credly.com/users/wesner-moise/badges>

- Certified Professional Cloud Architect
- Certified Professional Cloud Developer

### CodeChef competitive programming

<https://www.codechef.com/users/wmoise>.

- 11th in US and 138th in the world (99th %ile).