

Chris Umbel

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Implementing AI-driven automation and instrumentation to harden operations and incident response

Pittsburgh, Pennsylvania, United States

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Technology leader with more than 25 years of experience driving innovation, operational excellence, and business outcomes across software, infrastructure, cybersecurity, and cloud platforms. My current focus is the convergence of cybersecurity and artificial intelligence, where I apply a broad technical foundation and leadership experience to solve complex problems, manage risk, and enable organizations to adopt emerging technologies with confidence.

Experience

AI SRE Lead / Sr. Principal Site Reliability Engineer

Zscaler

May 2025 - Present

Led the strategy, implementation, and ongoing operation of an enterprise agentic SRE platform with our trusted partner, Resolve.ai. Owned the roadmap for AI-driven operational incident management, including the development of MCP-based integrations as well as agents that provided critical operational context and accelerated automated investigation and response.

Chief Information Officer / Chief Information Security Officer

Ravana, LLC

Apr 2022 - May 2025

As CIO and CISO, led enterprise technology and security strategy across infrastructure, operations, data platforms, and business applications. Held executive responsibility for managing and resolving high-impact cybersecurity

incidents, while defining and executing technology roadmaps that modernized core systems, improved operational effectiveness, and enabled scalable business outcomes.

Modern Apps and Infrastructure Lead

Ravana, LLC

Apr 2021 - Apr 2022

Led the architecture, implementation, and ongoing operation of enterprise Kubernetes infrastructure and CI/CD pipelines. Drove platform reliability, automation, and scalability by implementing modern DevOps practices that accelerated software delivery while maintaining security and operational excellence.

Product Manager

VMware

Jan 2021 - May 2021

Served as Product Manager for tooling that enabled application modernization and migration from legacy environments to modern cloud platforms, with a focus on J2EE, Spring and .NET sources.

.NET App Transformation Journey Lead

VMware

Dec 2019 - Jan 2021

Led the .NET Modernization Practice, helping organizations migrate legacy .NET applications to modern cloud platforms. Directed replatforming initiatives targeting Kubernetes and Cloud Foundry to improve scalability, reliability, and deployment agility.

.NET App Transformation Practice Lead

Pivotal Software, Inc.

Sep 2018 - Jan 2021

Led the .NET Modernization Practice, helping organizations migrate legacy .NET applications to modern cloud platforms like Cloud Foundry.

Solutions Architect

Pivotal Software, Inc.

Apr 2015 - Sep 2018

Partnered with customers to deploy Cloud Foundry and modernize legacy Java and .NET applications, enabling successful migration to a cloud-native platform.

Skunkworks Software Developer

Ravana, LLC

Jun 2010 - Mar 2015

Incubated R&D projects and tools used in our video encoding and delivery business using primarily open source technologies.

Database Administrator

Ravana, LLC

Mar 2007 - Jul 2010

Managed the organization's SQL Server infrastructure, including database administration, database development, business intelligence solutions, and performance optimization with a specialty in indexing and query tuning.

Senior Programmer

Unicentric

Sep 1999 - Mar 2007

Developed the data platform for the Unicentric "servicexpert" suite, creating an extensible and dynamic architecture that supported customer-specific data models and workflows without requiring separate database schemas.

Software Developer

Indianer Computer Corporation

1999 - 2002

Full stack developer focussed in Microsoft technologies.

Education

Penn State University - Master's degree - Artificial Intelligence

Aug 2024 - Aug 2026

Graduate program focused on the practical application of artificial intelligence, deep learning, reinforcement learning, machine vision, natural language processing, and data analytics to solve complex business and technical problems. Coursework emphasizes both the mathematical foundations of AI and the design,

development, evaluation, and deployment of AI solutions in real-world environments.

Penn State University - Bachelor of Science - Cybersecurity

Aug 2017 - Dec 2023

Interdisciplinary program combining cybersecurity, risk management, analytics, programming, and cyber defense to prepare graduates to identify, analyze, and mitigate modern information security threats. Coursework emphasized incident response, network security, malware analysis, digital forensics, security operations, and the application of technical and analytical methods to protect complex enterprise systems and data.

University of North Dakota

Apr 2024 - Jun 2024

Filling in some mathematical gaps before Master's

Certifications

Trusted AI Safety Expert (TAISE) Certificate

Cloud Security Alliance

Issued Jun 2026

XACSI34 - AI Security

Stanford Online

Issued Jun 2026

Certificate of Cloud Security Knowledge v.5 (CCSK)

Cloud Security Alliance

Issued May 2026

Certificate of Competence in Zero Trust (CCZT)

Cloud Security Alliance

Issued May 2026

CompTIA SecAI+ Certification

CompTIA

May 2026 - May 2029

Natural Language Processing (Graduate Certificate)

Penn State Great Valley

Issued Jan 2026

Microsoft Certified: Azure AI Fundamentals

Microsoft

Jul 2024 - Jul 2027 · License C13B9D3B40F4E544

CompTIA Security+ Certification

CompTIA

Apr 2024 - Apr 2027

Cisco Certified Network Associate

Cisco

Mar 2024 - Mar 2027 · License CSC014551066

National Security Agency - IST

Penn State University

Issued Dec 2023

Security and Risk Analysis Undergraduate Certificate

Penn State University

Issued Jan 2020

Patents

Grouping software applications based on technical facets

US 11,947,957 B2 · Issued Apr 2, 2024

Electronic charting system

US 7,849,400 B2 · Issued Dec 7, 2010

Method and apparatus to retrieve information from a network

US 6,584,468 B1 · Issued Jun 24, 2003

Skills

Machine Learning

Transformer Models

Large Language Models (LLM)

Generative AI

Presentation Skills

Software Architectural Design

EF Core
ASPNET Core
Entity Framework
.NET Core
Cassandra
ANSI C
Active Directory
CrowdStrike Falcon
Ruby
Splunk
Data Visualization
Statistics
Application Security
Offensive Security
Computer Forensics
Network Security
Windows Security
ZTNA
Wazuh
Redis
FreeBSD
LangChain
Fortinet
AWS
GCP
Transact-SQL (T-SQL)
TensorFlow

C
Site Reliability Engineering
Multi-agent Systems
Cryptography
SSRS
SSIS
VMware
Product Management
Pivotal Cloud Foundry (PCF)
Cloud Foundry
Spring Boot
Public Speaking
DevOps
Helm
CI/CD
Nodejs
Gitlab
Kubernetes
Executive Leadership
Project Management
Management
Linear Algebra
R
Python
MATLAB
Machine Vision
Networking

Cisco Systems Products
Natural Language Processing (NLP)
Cybersecurity
Cloud Computing
Security
Incident Response
Model Context Protocol (MCP)
Incident Command
Microsoft Azure
Artificial Intelligence (AI)
Linux
Ruby on Rails
Android
Solr
iOS
Business Intelligence
Microsoft SQL Server
SQL
ASPNET MVC
C#
ASPNET
.NET
JavaScript
MySQL
.NET Framework
Agile Methodologies
Java