

# Challenges of Recruiting and Retaining Cybersecurity Professionals



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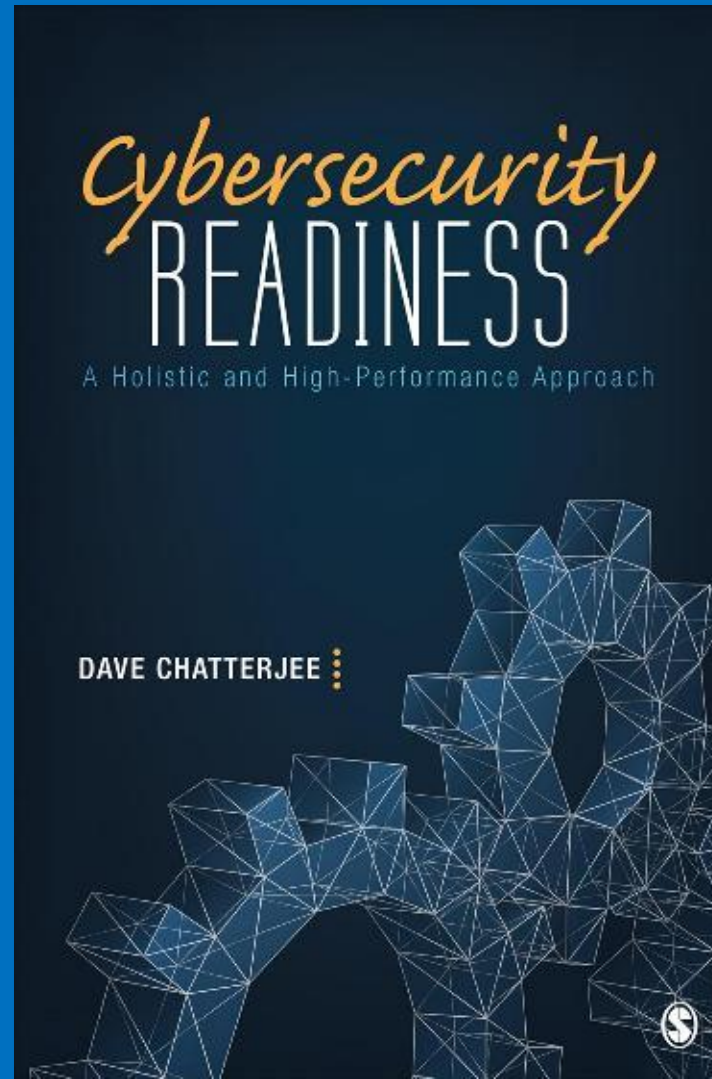
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# Agenda

- ▶ Introduction
- ▶ The State of the Cybersecurity Workforce
- ▶ Recruitment
- ▶ Retention
- ▶ Bibliography and Resources
- ▶ Q&A



# Introduction



**DAVE CHATTERJEE DROPS THE CYBERSECURITY JARGON,  
ENCOURAGING PROACTIVENESS RATHER THAN  
REACTIVENESS, APRIL 8, 2024**

- Adjunct Associate Professor, Pratt School of Engineering, Duke University
  - Master of Engineering in Cybersecurity
  - Executive Cybersecurity Certificate Program
- Author, [Cybersecurity Readiness: A Holistic and High-Performance Approach](#), SAGE Publishing
- Host and Producer, [Cybersecurity Readiness Podcast Series](#)
- Published in top academic and practitioner journals
  - Wall Street Journal; MIT Sloan Management Review; MIS Quarterly; Business Horizons; California Management Review
- Served on a cybersecurity SWAT team
- Featured on [Forbes](#), [Chicago Tribune](#), [USA Today](#), [Yahoo!Finance](#), [Business Insider](#), Morning Star, GlobeNewswire, and others.
- Strategic Advisor
- Speaker and Moderator



# The State of the Cybersecurity Workforce

# Cybersecurity Workforce Stats

## The Gap

The gap between the active workforce and the “perceived” unmet need for additional cybersecurity professionals grew 19% to 4.8 million jobs globally

01

## Demand

Total workforce needed to satisfy demand jumped 8% to 10.2 million people last year

02

## Annual Growth

The workforce has growing slightly by about 0.1%

03

## Unfilled Cybersecurity Jobs

Over 3.4 million unfilled cybersecurity jobs globally in 202

04

## U.S. Cyber Jobs

An estimated nearly 1.3 million people work in U.S. cybersecurity jobs this year, but that’s down 3% from almost 1.34 million professionals in 2023

05

# Why is there a skill shortage?



Growth in Threat Complexity



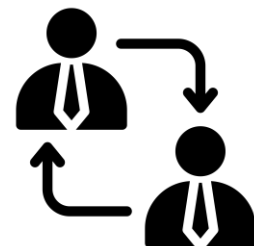
Inaccurate Perception of Skill Requirements



Unrealistic Job Descriptions



Overworked Employees



High Employee Turnover



# Recruitment

# Hiring Strategies & Approaches



## Gamifications and Hackathons

Companies like Google, Facebook, and IBM have successfully used **capture-the-flag (CTF) type competitions** to identify top cybersecurity talent.



## Skill-Based Assessments

Exemplar organizations engage candidates in cybersecurity related problem-solving exercises



## Online Talent Platforms

Exemplar organizations engage with talent platforms such as HackerRank and TryHackMe to identify talent.



## Internships

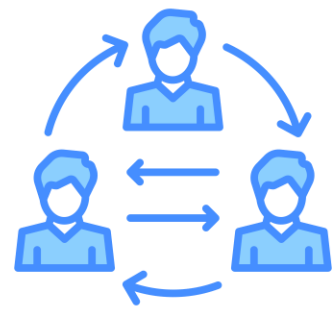
Mentor and develop talent aligned with organizational needs.



# Retention



# Retention and Burnout Prevention Strategies



Skill Development and Job Rotation



Flexible Work Arrangements



Leadership and Mentorship



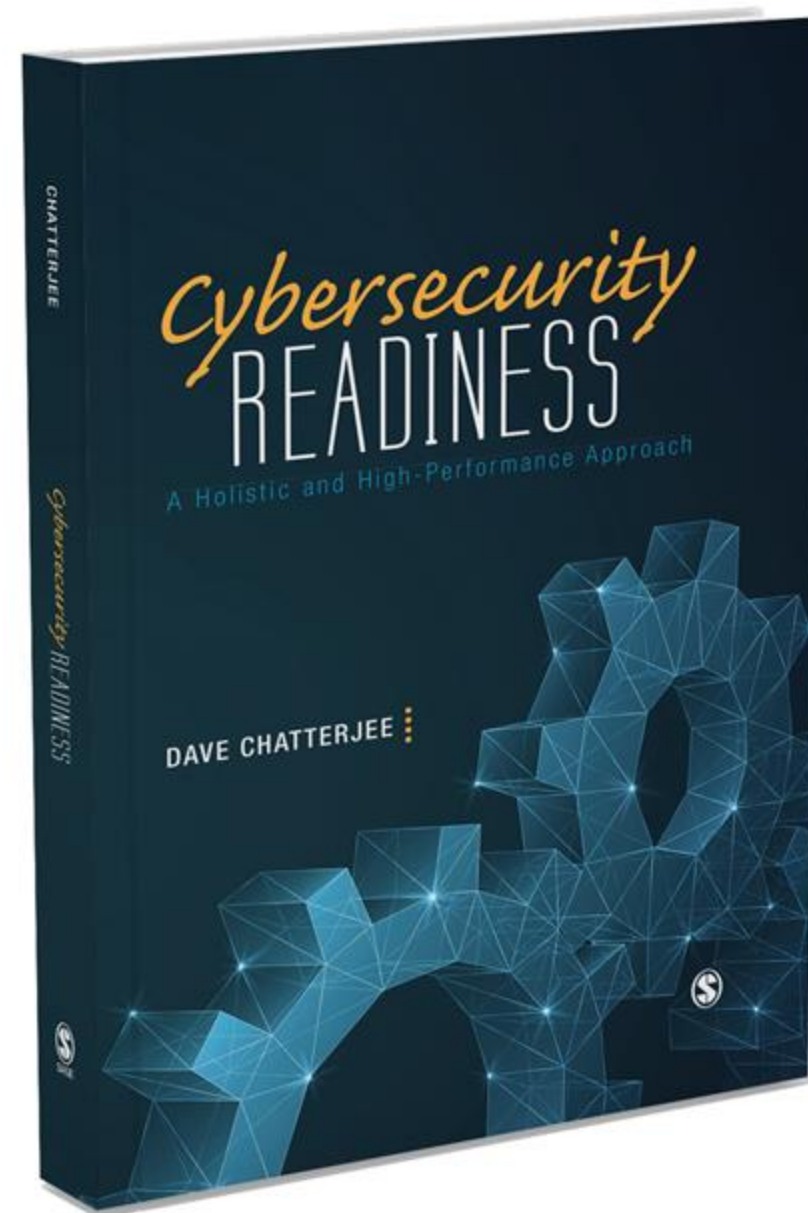
Mental Health and Wellness Programs



Recognition and Career Growth

# Bibliography and Resources

# Publications



[Chatterjee, D. \(2021\). \*Cybersecurity Readiness: A Holistic and High-Performance Approach\*, SAGE Publishing, March 2021.](#)

## Cybersecurity Publications

- ▶ [Chatterjee, D. and Leslie, A. \(2024\). "Ignorance is not bliss: A human-centered whole-of-enterprise approach to cybersecurity preparedness," \*Business Horizons\*, Accepted on Oct 29, 2024.](#)
- ▶ [Isik, O., Chatterjee, D., and Lourenco, D.A. \(2024\). "Getting Cybersecurity Right," \*California Management Review — Insights\*, July 8, 2024.](#)
- ▶ [Chatterjee, D. \(2022\). "Preventing security breaches must start at the top," \*by IMD\*, September 28, 2022, Institute for Management Development \(IMD\), Lausanne, Switzerland.](#)
- ▶ [Chatterjee, D. \(2021\). \*Cybersecurity Readiness: A Holistic and High-Performance Approach\*, SAGE Publishing, March 2021.](#)
- ▶ [Benz, M. and Chatterjee, D. \(2020\) "Calculated risk? A cybersecurity evaluation tool for SMEs," \*Business Horizons\*, 63\(4\), July-August 2020, 531-540.](#)
- ▶ [Chatterjee, D. \(2019\) "Should Executives Go To Jail Over Cybersecurity Breaches?" \*Journal of Organizational Computing and Electronic Commerce\*, 29\(1\), pp.1-3; Feb 17, 2019.](#)
- ▶ [Abraham, C., Chatterjee, D., and Sims, R. \(2019\) "Muddling through cybersecurity: Insights from the U.S. healthcare industry," \*Business Horizons\*, 62\(4\): 539:548, July-August, 2019.](#)



# The Cybersecurity Readiness Podcast Series


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### Elevating Your Offensive Security Program

Dr. Dave Chatterjee hosts a discussion on elevating your offensive program with Mark Carney, CEO @ Evolve Security, and Yaron Levi, Chief Information Security Officer (CISO) at Dolby Labs. They emphasize the importance of a proactive, continuous approach to cybersecurity, ...

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Feb. 3, 2025

### Using Blockchain Technology to Make Messaging Apps More Secure and Private

Dr. Dave Chatterjee and Kee Jefferys, Technical Co-Founder of Session, discuss the use of blockchain technology in enhancing the security and privacy of messaging apps, specifically Session. Session, which has over a million monthly active users, uses a decentralized network ...


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Jan. 13, 2025

### Authenticate without Storing Credentials: MIT Scientist Cracks the Code

Tina Srivastava, Ph.D., MIT Lecturer and Co-Founder of Badge Inc.



Dec. 31, 2024

### It's really important to ensure transparency

Shriv Mehta, Founder and CEO at Secureframe

yahoo!  
finance

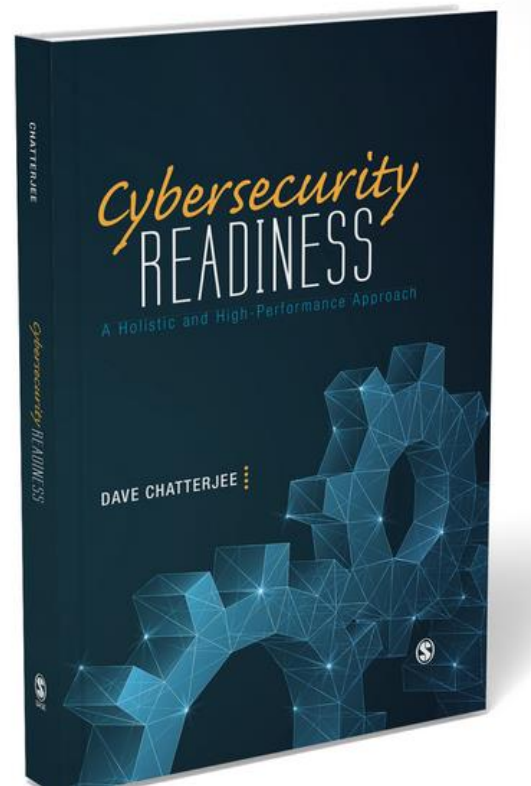
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# Q&A





# THANK YOU!!



## Book

Cybersecurity Readiness: A Holistic and High-Performance Approach

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## Podcast

The Cybersecurity Readiness Podcast

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<https://www.cybersecurityreadinesspodcast.com>



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