

# Gautham Koorma

Principal Consultant

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**Quandary Peak Research**

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With over a decade of experience spanning AI safety, digital forensics, and IP strategy, I specialize in turning complex technical issues into clear, actionable insights for litigation and product strategy. My work has ranged from developing machine learning models for threat detection to performing deep source code and system analysis in high-stakes legal matters. At Quandary Peak Research, I draw on this breadth of expertise to support clients facing technical challenges in software IP, cybersecurity, and generative AI. Whether it's reverse-engineering systems or evaluating model robustness, my goal is to deliver precise technical analysis that supports sound legal and business decisions.

## Education

### Master of Information Management & Systems

University of California, Berkeley – School of Information | Berkeley, CA | 2021–2023

- **Coursework:** Machine Learning, Deep Learning, Natural Language Processing, Computer Vision, Audio Signal Processing, Data Engineering, Experiments & Causal Inference, Quantitative Research, Information Law & Policy, Lean Product Development.
- **Teaching Assistantships:** Natural Language Processing, Applied Econometrics, Applied Machine Learning.
- **Research:** Deepfake detection and media forensics under Professor Hany Farid.

### B.Tech in Electronics & Communication Engineering

National Institute of Technology, Calicut | Calicut, India | 2007–2011

- **Focus:** Telecom & Wireless Networks, Digital Signal Processing, Microprocessor and Microcontrollers, Computer Architecture

## Areas of Expertise

### Data Science & Engineering

Python, SQL, R, PyData Stack (pandas, numpy, scipy), Data Visualization (matplotlib, seaborn, plotly), A/B Testing, Experiments & Causal Inference, Superset, PySpark, Airflow, DAGs, Snowflake

### Machine Learning & AI

Scikit-learn, PyTorch Ecosystem (torch, torchvision, torchaudio, timm, lightning), Huggingface, TensorFlow, Keras, XGBoost, MLflow, DVC, OpenCV, dlib, MediaPipe, librosa, opensmile, pyannote, ffmpeg, openclip

### MLOps & Deployment

Docker, Ray, Terraform, AWS SageMaker, ONNX, GitHub Actions, Weights & Biases, AWS Lambda & ECS

### Forensics & Red Teaming

Adversarial Testing, Failure Mode Analysis, Model Interpretability, Bias/Fairness Audits, Prompt Injection, Synthetic Media Detection (images, audio, video), Reverse Engineering, Digital Forensics

## Research & Product Focus

Computer Vision, Audio/Signal Processing, NLP, Generative AI, Cybersecurity, Explainability, Lean & Agile Methods, Product Roadmaps, Research Translation

## Hardware & Systems

Microcontrollers, Embedded Systems, System Software, Memory Management, Wireless Standards (WiFi, LTE, GSM), FPGA Logic Design, RTL Simulation

## Programming Languages

Python, SQL, R, C, C++, Java, Javascript, Verilog

# Employment

## Quandary Peak Research

**Principal Consultant** | Hayward, CA | June 2025–Present

- Lead technical investigations in software-related litigation, including source code analysis, reverse engineering, and digital forensics. Advise clients on AI safety and strategy, helping organizations assess risk and implement responsible AI systems.

## GetReal Labs Inc.

**Senior Machine Learning Engineer** | Berkeley, CA | June 2023–Mar 2025

- Domain: Cybersecurity & Digital Forensics.
- Founding member of technical staff focused on developing machine learning models for synthetic media detection across image, audio, and video modalities.
- Built and deployed containerized ML pipelines for training, validation, and inference on AWS infrastructure.
- Designed threat taxonomy and led adversarial and robustness evaluations to strengthen model performance.
- Supported incident response workflows during the 2024 election cycle, enabling media triage and analysis.

## Moveworks Inc.

**Data Science Intern** | Mountain View, CA | May 2022–Aug 2022

- Domain: Product Analytics.
- Developed dashboards and success metrics to evaluate adoption and performance of conversational AI features.
- Provided data insights to inform product strategy and improve user engagement across enterprise clients.

## UnitedLex Corporation via iRunway

**Director / Consultant / Associate** | Austin, TX & Bangalore, India | Oct 2012–July 2021

- Domain: Litigation Support & IP Strategy.
- Led technical investigations in IP litigations across wireless, software, semiconductors, and enterprise systems.
- Delivered source code analysis, product testing, and technical documentation for use in expert reports and legal proceedings.
- Conducted reverse engineering and dynamic/static analysis of software and firmware to identify infringement and trade secret usage.
- Built analytics pipelines to evaluate patent strength, product alignment, and licensing potential.

- Performed technical due diligence on IP portfolios in M&A and licensing contexts, aligning IP with product strategy and market trends.
- Engaged with law firms and in-house counsel to translate technical findings into actionable litigation and licensing strategy.
- Managed global teams across delivery and operations; led hiring, training, and process optimization initiatives.

## **Evalueserve SEZ Pvt. Ltd.**

**Research Associate** | Gurgaon, India | Feb 2012–Oct 2012

- Domain: Patent Research.
- Trained in patent law, prior art methodologies, and technical writing for IP prosecution and analysis.
- Conducted prior art searches and created technology landscape reports to support legal and business decisions.

## **Litigation Consulting**

### • **DivX, LLC v. Amazon.com, Inc., and Amazon Web Services, Inc.** | July 2025–Present

Jurisdiction: US District Court, Eastern District of Virginia

Case Number: 1:24-cv-02061

Counsel: Robins Kaplan LLP

Nature of Suit: Patent

Technology: Video coding and content encryption

### • **Infernal Technology, LLC, and Terminal Reality, Inc**

**v. Sony Interactive Entertainment, LLC** | Jan 2020–July 2021

Jurisdiction: US District Court, Eastern District of Texas

Case Number: 2:19-cv-00248-JRG

Counsel: Buether Joe & Counselors LLC

Nature of Suit: Patent

Technology: Computer Graphics

### • **Infernal Technology, LLC, and Terminal Reality, Inc v. Activision Blizzard, Inc** | July 2019–July 2021

Jurisdiction: US District Court, Northern District of Texas

Case Number: 3:18-cv-01397-D

Counsel: Buether Joe & Counselors LLC

Nature of Suit: Patent

Technology: Computer Graphics

### • **Silvaco, Inc. v. Gliding Eagle, Inc.** | Sept 2019–Oct 2019

Jurisdiction: US District Court, Northern District of California

Case Number: 5:18-cv-07135-SVK

Counsel: Gaw | Poe LLP

Nature of Suit: Breach of Contract

Technology: Blockchain, E-Commerce

### • **Applied Invention v. DuPont Pioneer** | Oct 2018–Feb 2019

Jurisdiction: American Arbitration Association

Case Number: AAA 01-18-0000-8614

Counsel: Irell & Manella LLP

Nature of Suit: Trade Secret

Technology: Precision Agriculture

- **BMC Software, Inc. v. Cherwell Software, LLC** | Aug 2017–July 2018  
 Jurisdiction: US District Court, District of Colorado  
 Case Number: 1:17-cv-03127-MSK-STV  
 Counsel: McKool Smith  
 Nature of Suit: Patent  
 Technology: IT Infrastructure Management
- **Sony Corporation v. Fujifilm Corporation** | Oct 2017–June 2018  
 Jurisdiction: International Trade Commission  
 Case Number: 337-TA-1058  
 Counsel: Baker Botts LLP  
 Nature of Suit: ITC Investigation  
 Technology: Firmware, Magnetic Tape Drives
- **Fitbit, Inc. v. Aliphcom (d/b/a Jawbone)** | Mar 2016–Sept 2016  
 Jurisdiction: US District Court, Northern District of California  
 Case Numbers: 5:2016-cv-00118; 5:2015-cv-04073  
 Nature of Suit: Patent and Trade Secret  
 Technology: Wearables, Fitness Tracking Algorithms
- **Ericsson Inc. v. Apple Inc.** | July 2015–Dec 2015  
 Jurisdiction: International Trade Commission  
 Case Number: 337-TA-953  
 Counsel: McKool Smith  
 Nature of Suit: Patent  
 Technology: Mobile Communications, Bootloaders, Security
- **Klaustech LLC v. Google Inc. / AdMob Inc.** | July 2015–Dec 2015  
 Jurisdiction: US District Court, Northern District of California  
 Case Number: 10-cv-05899-JSW  
 Counsel: Mischo de Reya  
 Nature of Suit: Patent  
 Technology: Mobile Advertising
- **Ericsson Inc. v. Samsung Electronics Co. Ltd.** | 2014–2015  
 Jurisdiction: US District Court, Eastern District of Texas  
 Counsel: McKool Smith  
 Nature of Suit: Patent  
 Technology: Wireless Communications (GSM, WCDMA, LTE, Wi-Fi)
- **BMC Software, Inc. v. ServiceNow, Inc.** | 2016–2017  
 Jurisdiction: US District Court, Eastern District of Texas  
 Case Number: 2:14-cv-00903-JRG  
 Counsel: McKool Smith  
 Nature of Suit: Patent  
 Technology: IT Infrastructure Management
- **Intellectual Ventures LLC v. Capital One Financial Corporation** | 2014–2017  
 Jurisdiction: US District Court, Eastern District of Virginia  
 Counsel: Feinberg Day  
 Nature of Suit: Patent  
 Technology: PCI-DSS, Payment Processing

- **No Magic, Inc. v. Thales Security, Inc.** | 2013–2014  
Jurisdiction: US District Court, Eastern District of Texas  
Counsel: DiNovo Price Ellwanger & Hardy LLP  
Nature of Suit: Patent  
Technology: Cybersecurity, Cryptography

## Intellectual Property Consulting

- **Automotive Manufacturer** | 2020–2021  
Evaluated engine control, vehicle safety, and connectivity systems.
- **Fortune 500 Semiconductor Company** | 2019–2021  
Assessed system software, memory architecture, and firmware IP.
- **Consumer Electronics Firm** | 2019  
Developed and executed structured test plans across multiple mobile phone models to gather empirical evidence supporting patent claims related to battery performance and degradation.
- **Global IP Holding Company** | 2014–2017  
Generated licensing evidence and evaluated software patent portfolios.
- **Fortune 50 System Software Provider** | 2014–2017  
Created invalidity and EoU charts for system/kernel software.
- **Networking Equipment Vendor** | 2013–2015  
Retained as a consultant to prepare licensing charts for a portfolio of networking patents.
- **Major Aftermarket Services Vendor** | 2013–2014  
Identified patentable technologies, supported patent drafting.
- **Telecom Monetization Entity** | 2012–2014  
Analyzed patents for acquisitions, Prepared licensing charts for telecom infrastructure patents.
- **Telecom Landscape Studies** | 2012  
Delivered market and patent whitespace analysis for wireless standards.

## Technical Due Diligence & Audits

- **Schneider Electric Industries SAS** | Technical Review | July 2025  
Technology: AI/ML Predictive Analysis, Smart Home IoT, SaaS.

## Grants

- **Digital Fingerprinting to Protect Against Deepfakes** | 2023  
Research Grant, Berkeley Center for Long-Term Cybersecurity  
<https://cltc.berkeley.edu/publication/digital-fingerprinting-to-protect-against-deepfakes/>

## Publications & Media

- **Case Study: AI & Elections** | 2024  
Panel Discussion, Online News Association  
<https://journalists.org/event/case-study-what-we-can-learn-about-ai-and-elections-from-the-worlds-biggest-election/>
- **Detecting Deepfakes: From Classical Physics to Deep Learning** | 2024  
Invited Talk, Anthill Inside (AI Governance)  
<https://hasgeek.com/anthillinside/detecting-deepfakes>
- **Detecting AI Voice Cloning** | 2024  
SXSW Innovation Award Finalist – Student Innovation Category  
<https://www.sxsw.com/news/2024/sxsw-2024-innovation-awards-finalists-announced/>
- **Quoted Commentary on Generative AI and Deepfakes** | 2024  
Featured in: [Biometric Update](#); [India Today](#); [MediaNama](#)
- **Deepfakes and Democracy** | 2024  
Panel Discussion, MediaNama (Tech & Policy)  
<https://www.medianama.com/2024/01/223-video-medianama-deep-fakes-democracy-2/>
- **The Deepfake Fingerprint** | 2023  
United Nations Development Programme | Prizewinner, Nobel Prize Summit on Countering Misinformation  
<https://www.undp.org/policy-centre/governance/events/undps-participation-nobel-prize-summit-2023>
- **Single and Multi-Speaker Cloned Voice Detection: From Perceptual to Learned Features** | 2023  
*S. Barrington, R. Barua, G. Koorma, H. Farid.* IEEE International Workshop on Information Forensics and Security (WIFS).  
<https://ieeexplore.ieee.org/abstract/document/10374911>

## Languages

- English, Malayalam, Hindi