# NATHAN SCHNEIDER

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## EDUCATION

**Dartmouth College,** Hanover, NH                                                                 **June 2022**
*Bachelor of Arts, Major in Computer Science, Minor in Engineering Sciences*                     **GPA 3.80**
**Relevant Coursework:** ML, AI, Reinforcement Learning, Robotics, Discrete Mathematics     **Major GPA 3.88**
**Honors/Awards:** Citation for Meritorious Performance in Introductory CS, OOP, Machine Learning

## SKILLS

Programming Languages: Python, Java, JavaScript/Typescript, Bash, Go, C, Arduino
AWS: AWS CDK, Bedrock, Lambda, Cloudformation, API-Gateway, S3, DynamoDB, Cloudwatch
Web Development: React.js, Node.js, Ruby on Rails, SQL, MongoDB
Data Science: R, RStudio, Tidyverse, NumPy, Pandas, Pyplot, SQL
Other: Strong communication skills, Diverse mathematics background, Interdisciplinary team experience

## WORK EXPERIENCE

**Amazon Web Services**, Seattle, WA                                                 **April 2025 - Present**
*Software Development Engineer, II AWS Bedrock Guardrails*
- Launched LLM backed guardrail tiers, now processing over 150M tokens/minute for over 60 languages
- Optimized prompt based systems for latency, cost, and availability with prompt caching, cross-region inference
- Configured Guardrail Image Filter model for inference, improving throughput 50% with multi-tenant GPU hosts
- Developed an internal-only system for in-domain confidence of Guardrails content moderation

**Amazon Web Services**, Seattle, WA                                         **September 2023 - April 2025**
*Software Development Engineer, AWS Bedrock Guardrails*
- Launched customer-configurable PII detection guardrails for AWS Bedrock, now processing 250M tokens/minute
- Increased language model performance 84% with Flash Attention and classification heads, increasing throughput
- With these optimizations, reduced hosting costs by 64% across our 4000 GPU fleet, reducing customer costs
- Leveraged AWS CDK Infrastructure-as-Code to deploy across 25 AWS regions with 99.99% availability
- Served as engineering liaison for a team of PHD Machine Learning scientists to optimize SLMs for inference

**Amazon Web Services**, Seattle, WA                                         **August 2022 - September 2023**
*Software Development Engineer, AWS IoT Greengrass*
- Using AWS CDK IaC, implemented native AWS canary services to monitor the health of our product
- Officially recognized by team for outstanding work in over 45% of sprint retrospectives
- Developed open-source software components for high availability intelligent edge systems

## PROJECT EXPERIENCE

*Kobold Broker: Video Game Marketplace Appraisal and Automated Trading*          **October 2024 - April 2025**
- For the video game Dark and Darker, used Wireshark to read unencrypted traffic from game servers
- Decompiled client binary to extract protobuf definitions for marketplace listings
- Spoofed client traffic to create an automated marketplace bot to store listings and predict prices for arbitrage
- After proof of concept, reported findings to developers to prevent abuse of these systems

*MANI: Gesture Controlled Virtual Assistant*                                   **November 2022 - June 2022**
- Led a team of peers develop a gesture-based virtual assistant, utilizing computer vision and machine learning
- Integrated Mediapipe Hands for feature analysis to scikit-learn time-series models for gesture classification
- Optimized pose tracking computer vision models using Google Coral tensor processing units (TPUs)
- Deployed software and motorized robotic peripherals on Raspberry Pi computers