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WORK EXPERIENCE

PDFSage Inc. — Burlington, MA, USA

Full-Stack and Machine Learning Engineer (December 2024 – Present)

- Formed a C-Corporation in Delaware, holding 100% ownership, with the IRS share purchase completed in January 2025.
- Developed an AI-driven PDF application featuring a jobs-controller for bulk multi-threaded tasks, supporting both iOS and web platforms.
- iOS version currently more advanced, boasting hundreds of users within the first week, as tracked via Firebase Auth and AIPoints integration.
- Ongoing goal: surpass Adobe AcrobatPro's feature set and user experience.
- Created **PDFSage Device Tools** as a “Swiss Army Knife” for iOS with continuous updates, ensuring it remains a go-to resource for users.
- Initiated development of proprietary machine learning models, including:
 - **ExploitGPT**: A from-scratch, fully proprietary multi-layer Transformer model designed for vulnerability scanning and exploit generation.
 - **StupidityModel**: A classification and generative ML framework built on base models, focusing on comedic or “naive” generation tasks.
- Expanded into game development with an advanced **Connect 4 AI** that employs minimax with alpha-beta pruning (and upcoming Alpha Zero enhancements) for cross-platform PvP functionality (web, iOS, Android).
- Building a GenAI video tutorial platform, integrating AWS IVS and YouTube for live chats, demonstrations, and real-time Q&A, aiming to elevate professional capabilities in engineering and beyond.
- Developed a prototype for **AIPoints** to potentially monetize AI-driven premium features across the entire PDFSage ecosystem, though most focus remains on establishing robust basic functionality and shared Firebase Auth across all apps.

Various Startups — United States & China

Engineer and Business Developer (2017 – 2024)

- Collaborated on several early-stage ventures, spanning a nutrition supplement company in China aimed at diabetes prevention, a next-gen dating platform, and other technology-driven concepts.

- Concurrently undertook graduate-level coursework in Computer Science, deepening expertise in advanced algorithms and software engineering.

ONE Consulting Inc. — Hong Kong, SAR

IT Consultant (2014 – 2015)

- Contributed to the IT infrastructure for one of Apple's major suppliers, an enterprise generating over USD \$1B in annual revenue.

Kensho Technologies Inc. — Cambridge, MA, USA

Product Manager, Events Database (2013 – 2014)

- Owned and maintained the firm's real-world **Events Database**, extracting structured information from unstructured data using Python-based scripts.

- Provided business intelligence insights into how events might impact capital markets, designing cost-efficient, high-performance algorithms.

- As an early hire, significantly contributed to Kensho's successful Series A and B funding rounds. The eventual partnership with S&P Global culminated in Kensho's acquisition for \$550M in 2018.

EDUCATION

Harvard University – HarvardX — Cambridge, MA

- *Professional Certificate in Computer Science for Artificial Intelligence* (2023–2025)

- *Professional Certificate for Learning Python for Data Science* (2023–2025)

Tufts University – School of Engineering — Medford, MA

- *Bachelor of Science in Engineering Science, cum laude* (September 2006 – June 2010)

- GPA: 3.4/4.0 undergraduate; 4.0/4.0 graduate courses; 3.9/4.0 in Computer Science courses

SKILLS & ACCOMPLISHMENTS

- **Programming & Tools:** Python, JavaScript, TypeScript, C++, Swift, Kotlin, Go (some), Rust (some), TensorFlow, PyTorch, scikit-learn, MAUI .NET (Visual Studio IDE), Xcode, Android Studio.
- **Frameworks & Platforms:** Next.js, Angular (CLI), React, Firebase, Azure, AWS (various services including advanced ML pipelines).
- **Machine Learning & AI:** Transformer-based models, classification and generative tasks, multi-layer neural networks, advanced ML frameworks, including the creation of ExploitGPT and other security-focused AI.
- **Security Engineering:** Developed scanners and exploit models referencing CVEs and exploit databases; integrated advanced scanning workflows into the ExploitGPT pipeline.
- **Game Development:** Created cross-platform Connect 4 AI with alpha-beta pruning and upcoming Alpha Zero functionality for optimal gameplay on web, iOS, Android, and future Windows/MAUI/Unity releases.
- **Mobile & Web Applications:** Built multiple iOS apps leveraging Swift (with GameCenter integration), Android apps, and cross-platform or cloud-powered backend solutions using Firebase Auth.
- **Cloud Infrastructure:** Deep expertise in Google Cloud and AWS, from compute to ML and analytics services; prior experience supporting an NBA player recommendation system using ML at a Google Cloud event.
- **Payment & Monetization:** Implemented Stripe APIs on iOS, exploring “AIPoints” integration for potential premium features and usage-based monetization.

Notable Projects

- **PDFSage:** AI-driven PDF tool for reflow text, scanning, advanced editing, multi-media integration, and robust cross-platform usage.
- **ExploitGPT:** Proprietary vulnerability scanner and exploit generator leveraging Transformers trained on CVE, exploitdb, and other sources.
- **Connect 4:** Feature-complete cross-platform game with adjustable AI difficulty, multiplayer support, and integrated leaderboards.
- **InfinityX:** Next-generation photos library concept emphasizing strict GPS metadata, scikit-learn image editing, TFLite integration, and advanced ML editing tools.

ADDITIONAL INFORMATION

- **Standardized Test Scores:**

- *ASVAB (U.S. Department of Defense, 2023): 141 on the Army General Technical score (approx. 4.1 standard deviations above median).*

- **Ongoing Projects:**

- Fine-tuning ExploitGPT for better vulnerability detection and real-time scanning.
- Enhancing PDFSage iOS functionalities (reflow text SDK, custom CameraView, performance optimizations).
- Building a full GenAI guide using AWS IVS and YouTube to deliver live, interactive educational sessions.

- **Disclaimer on NBA Recommendation:**

- While direct experience recommending NBA draft picks from iOS data points is limited, the underlying data science and machine learning methodologies are comparable, providing transferable expertise.

- **Future Plans:**

- Expanding monetization strategies once core user features are optimized.
- Integrating advanced AI solutions (Alpha Zero, generative models) to scale next-gen user experiences in gaming, security, and PDF technology.

HYPERLINKS & REFERENCES

- **PDFSage:**

- Website: <https://www.pdfsage.me>
- Alternate: <https://www.pdfsage.io>

- **iOS Apps:**

- Device Tools: [App Store Link](#)
- PDFSage: [App Store Link](#)
- Connect 4: [iOS](#) | [Android](#)
- **Github:** <https://www.github.com/ghidradragon>
- **YouTube:** <https://www.youtube.com/@ghidradragon>
- **Resume:** [Google Docs Link](#)

- **Legal:** [Proton Drive Link](#)
- **Misc. Links:**
- [o1-pro Enabled pseudo Global Times](#)

Note:

- Committed to responsible use of security research. All references to ExploitGPT and related projects are strictly for legitimate security testing and educational purposes.
- Continually exploring ways to refine skill sets, deliver robust products, and innovate using GenAI.