Dan Peknik

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Machine Learning Test And Design Professional

Summary

A "Unicorn", currently focused on assessing secure, local AI models and runtimes. Evaluation of AI environment security and safety characteristics with focus on major datasets from Google, Anthropic, OpenAI and others. Code review and conducting testing and development of specialized models trained on targeted datasets for mission-critical domains such as automated passenger air-taxi, satellite control systems and FAA flight controller centers. Researching how to lower hardware costs, increasing performance and strengthening security through full control of code and training corpora (Chain of Thought). Previously developed automation strategies and Human Factors engineering requirements for self-piloted passenger aircraft (UAM) used in air traffic control system design. Built assisted automation frameworks and network tooling for Unix OS vulnerability testing and documentation.

Highlights

+ Software process, vendor research and data visualization for LLM tools
+ System architecture, test and validation, regression and network scalability
+ Unix, Linux OS performance test and evaluation (Mint, MacOS, ARTos and more)
+ Python, C, Objective C and several other common programming environment
+ High level systems research methodology, Human Factors specifications for AI
+ Design and testing of local LLM for in-house IoT platforms
+ Design and testing of LLM document ingestion process for assisted automation
+ Design and configuration of proof-of-concept Exo cluster
+ Design and testing of LLM document ingestion process for assisted automation
+ LangChain ingestion and sifting of research data for dashboard displays
+ Cloud VPS validation and testing for remote LLM applications
+ Code review of various tools using Claude and Xcode
+ Multiple presentations on automation capabilities of AI, focus on human safety
+ Multiple presentations on assisted vs. full automation and control with AI and human interaction: how to trace actions and locate failures of logic
+ Assessment of GUI front ends LMStudio, GPT4ALL, Ollama and other open source
+ Report generation of failures of AI Chain of Thought to propose vendor improvements
+ Review and assessment of MCP protocol and maturity for deployment
+ Short stint at Los Alamos National Labs to assess document ingestion system vulnerabilities
+ Network and System visual diagrams with SolarWinds, Google Canvas and more
+ Expert level visualization skills via hand sketching, Adobe tools and 3D modeling

San Jose State University Research Foundation/NASA Test Engineer 2020-2025
+ Creation of LLM systems environments and process for all test labs
+ Auditing of Human Factors Engineering test labs, system security and process
+ Ran all cloud related functions of research labs, experiments
+ Advisor and designer of system architecture, testing labs, audit tools

NASA Ames Research Center Design Engineer 2013-2020
+ Web app build and cloud maintenance for online weather-based decision tool
+ Overseeing use and integration of internal code repository tools (revision control)
+ Auditing Human Factors researchers for security of PII data
+ Maintenance and audit of Confluence systems, databases and build platforms

Plural Designs, Inc. Owner and Consultant 2010-2013
+ Managed twelve technical Design Consultants Google, Samsung, LG, Apple
+ Project definition and Statements Of Work with schedules, ran all business
+ Presentations, often daily, with clients: engineering staff and project teams

Apple, Inc. Performance Networking and OS Test Engineer 2007-2010
+ Built automated tests and networks for MacOS (formerly NeXT) Unix OS
+ Isolated and reported security and bug regressions for Unix networking tools
+ Configured heterogeneous network for application of automated testing tools

Education

Western Connecticut State University, Danbury Connecticut
MIS Information Systems, Three years, transferred programs

San Jose State University, San Jose California
Bachelor Science, Industrial Design, Magna Cum Laude Degree Granted

Arizona State University, Mesa Arizona
Masters, Human Performance Engineering, in progress

Decker Communications Public Speaking Skills Certificate

Publications

"*Portable Security System*", Utility Patent U.S. US2016-0275765A1
"*Flight Awareness Collaboration Tool*" Utility Patent ARC-17793-1
"*Urban Air Mobility Fleet Manager Gap Analysis*" Published, NASA
"Operational Airspace Sectorization Integrated System Tool" Published, NASA
"Flight Awareness Collaboration Tool" Published, NASA
"Generic Airspace Report" Published, NASA