

CHAD JACOB MILIOS

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POSITIONS SOUGHT:

Software Engineer/Developer; Information Technology Project/Department Manager; Information Processing System Architect/Engineer; Blockchain Technology Consultant/Engineer; System Security Analyst; Financial Market Analyst

PROFESSIONAL SKILLS:

- **COMPUTER PROGRAMMING** — optimizing productivity, comprehensibility, extensibility and verifiability through sound application and combination of situationally appropriate paradigms from numerous disciplines; maintaining stability with automated unit testing and continuous integration testing; using languages including C, C++, Erlang, Elixir, PERL, Python, Java, Groovy, Closure, Scala, Ruby, Tcl, PHP, Javascript, Lua, Eiffel, R, OCaml, Opa, Go, Dart, Prolog, CycL, Oz/Mozart, Occam- π , Haskell, Lisp/CLOS and Scheme; operating system and application programming interfaces including POSIX (UNIX), 4.4BSD-Lite, GNU, L4, L4Re, SDL, Qt, Tk, NW and Electron; combining data processing frameworks and components including Akka, Storm, Samza, SAMOA, Hadoop, Apex, Spark, Flink, Beam, Arvados Crunch, Giraph, Pig, Sqoop, Oozie, RabbitMQ, Kafka, Gearpump, Lucene, Mahout, Torch, TensorFlow, MLlib, Scikit and SINGA; web server frameworks including Phoenix, Cowboy, Nitrogen, Zotonic, Node, Connect, Express, Flatiron, Meteor, OpenResty, Mochi, Mojolicious, Plack, Catalyst, Laravel, CodeIgniter, CakePHP, Yii, Kohana, Symfony, Drupal, Django, Rails and Sinatra; web client libraries including Vue, Angular, Polymer, jQuery, D3 and Three; mobile application frameworks including Cordova and Ionic; W3C standards including DOM, HTML5, CSS3, SVG, WebGL, WebRTC, XML, XSL (i.e. XSLT, XPath, XSL-FO), XQuery, SMIL, SOAP, WSDL, RDF, OWL and SPARQL; inspecting and profiling during development or in production with facilities including DTrace, Ptrace, Strace, LTTng, Ktrace and KTR
- **SYSTEM ADMINISTRATION** — provisioning and maintaining systems running FreeBSD, NetBSD, OpenBSD, Oracle Solaris, illumos, z/OS, Fiasco.OC, TUD:OS, Genode, L4Ka::Pistachio and various Linux distributions including Gentoo, Slackware, Debian, Ubuntu, SUSE, openSUSE, Fedora, CentOS and Red Hat; managing hardware with security-conscious application of technologies including IPMI, iKVM and Intel Management Engine; managing virtualized, paravirtualized and quasivirtualized environments using NOVA, Karma, z/VM, Xen, VirtualBox, Oracle Enterprise Manager, VMware ESX, Linux KVM, OpenVZ, LXC (Linux cgroups & namespaces), Solaris containers and BSD jails; implementing advanced data storage and management infrastructure using technologies including iSCSI, ZFS and Lustre; integrating, administering, maintaining and scaling secure services including DNS, web, file (NFSv4 & SMB/CIFS), print (CUPS & SMB), authentication/policy (Kerberos v5 w/ GSS v2 & FreeIPA); designing and operating practical, secure voice and video over IP solutions utilizing WebRTC, Kamailio, OpenSIPS, Asterisk and FreeSWITCH; engineering, deploying and managing practical, performant, secure implementations of relational and non-relational datastores including Postgresql, MySQL, Drizzle, Oracle DB, Actian Matrix, Impala, OpenLDAP, CouchDB, MongoDB, Redis, Cassandra, Neo4j, Titan, AllegroGraph, FlockDB, Arvados Keep, Solr and Elasticsearch
- **NETWORK ENGINEERING** — implementing small to large-scale SONET/SDH and ethernet based MPLS, IP v4 and v6 networks, intelligent routers using OSPF and BGP, short and long-range wireless networking technologies, quality of service enforcement and traffic shaping, tunnels and VPNs using L2TP and IPsec; designing or assessing advanced systems for supercomputing, clustering, and storage area networks (SANs); applying advanced topology design and technologies including InfiniBand, Scalable Coherent Interface, NumaConnect, RapidIO, QuickPath Interconnect and HyperTransport; designing application-aware gateways to improve performance and efficiency and/or enforce policy
- **INFORMATION SYSTEM ENGINEERING** — designing systems for flexible information processing and management, situational awareness and response, centrally-located to globally-distributed; engineering systems to operate at high-performance and/or in real-time; developing systems to be reliable, scalable and extensible; replacing, upgrading, integrating, retrofitting or migrating existing modern and legacy systems; mitigating undesired, unexpected, undetermined and indeterminable operational circumstances using redundant, isolated, layered, heterogenous assets and resources; thoroughly documenting decisions, actions and outcomes related to research, design, engineering and development processes; auditing and improving the entire process of design, engineering, development, deployment, maintenance and support; authoring complete reference and training material for system or product use, maintenance and extension
- **SECURITY ANALYZATION** — providing security by combining a holistic system design approach; thoroughly understanding system layer and component interactions; utilizing sound combination of cryptographic primitives and processes; ensuring security through meticulous scrutiny of evolving development procedures; mitigating undiscovered vulnerabilities through a security-in-depth approach; auditing and effectively applying security frameworks including seL4, TrustedBSD, HardenedBSD, Capsicum, Solaris Trusted Extensions, SELinux, security measures including IPsec, DNSSEC, firewalls, intrusion detection, honeypots and permanent logging systems
- **TECHNICAL CONSULTATION & PROCESS MANAGEMENT** — offering design, engineering, development and support for efficient effective economical business systems and processes; balancing requirements, time and budget; strategizing practical implementations of custom-tailored solutions; organizing resources and personnel into coherent, focused, motivated and efficient teams; intermediating communication between skilled talent and organizational management for effective situational awareness and prompt escalation of pertinent or relevant concerns; focusing responsibility and accountability for project timeline, budget and outcome; considering the current, expected and ultimately desired operational environments to select prudent and effective combinations of technologies, vendors, providers and personnel; auditing systems, projects, processes and personnel; capable across a spectrum: from facilitation of highly collaborative, iterative workflows with frequent interactive feedback cycles to handling delegated authority and responsibility for autonomous operation with succinct feedback
- **BLOCKCHAIN CONSULTATION & CRYPTOCURRENCY ANALYSIS** — designing, engineering and implementing advanced applications of blockchain technology; pioneering utilization of cryptocurrency applications; exploring legal regulatory frameworks; producing innovative financial applications interfaced with distributed cryptocurrency ledgers; consulting various actors and agencies of diverse interests in blockchain technology; balancing and maintaining customized diverse portfolios of cryptographic assets for numerous parties with varied financial outlooks and risk profiles; analyzing fundamental and technical properties of varied cryptoassets and associated markets
- **CREATIVE MEDIA DESIGN** — designing 3D graphics and animations using tools including Blender, LuxRender, Pixie, Aqsis, Physically Based Rendering Toolkit, POV-Ray, Maya, Houdini and Mantra; producing, composing and mastering audio and video using tools from Apple, Avid and Mark of the Unicorn, among others; proficient in the use of open standards as well as many industry-standard proprietary applications

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EDUCATION:

General Education Diploma: Correctional Center of Northwest Ohio, Stryker, Ohio: Jun 2004.

WORK EXPERIENCE:

Crop Circle Systems, Incorporated, Toledo, Ohio & Kissimmee, Florida: 1999 – present; Chief Executive Officer, System Architect, Software Engineer. developing cutting-edge products and services for the information technology industry; offering work-for-hire services for small and medium businesses at an exceptional value; supervising and maintaining past installations of solutions at more than a dozen prior and recurrent clients; developing, maintaining and supporting nuOS FreeBSD for commercial clients and free public distribution; managing nuOS community development efforts at nuOS.org; currently performing lead engineer role for web hosting service and application platform-as-a-service startup venture CargoBay.net

OUR RECENT CLIENTS INCLUDE:

<i>Tree Adams, Composer</i> Los Angeles, California	<i>Arizona Diamondbacks</i> Phoenix, Arizona	<i>U.S. Senator John McCain</i> Phoenix, Arizona	<i>American Express</i> Pasadena, California
<i>Exchange Bitcoins</i> Redwood City, California	<i>Flirtatious.com</i> Scottsdale, Arizona	<i>CoinLock</i> Tampa, Florida	<i>Coinbase</i> San Francisco, California

Spectrum Media Services, L.L.C., New York, New York: Dec 2016 – Feb 2017; System Architect, Software Engineer. replaced big-data infrastructure previously reliant on expensive commercial vendor's fragile proprietary product with a novel horizontally-scalable failure-resilient combination of log-structured and index-driven open-source components running on inexpensive commodity hardware, tripling system throughput and all but eliminating latency of available data in customer-facing web application

Twelfefold Media, Incorporated, San Francisco, California: Nov 2015 – Dec 2016; Software Developer, Database Administrator. became resident expert of petabyte-scale data warehousing and analytics platform based on commercial parallel-processing database solution; developed real-time data ingress pipelines, more than doubling the timeliness of available data; refactored data-structures of company's primary service, an industry-leading proprietary data analytics platform, increasing throughput beyond tenfold

Real-Time Gaming Network, L.L.C., Toledo, Ohio: Aug 2014 – Apr 2015; Chief Technical Officer, System Architect/Administrator, Software Engineer. developed proprietary live entertainment network and advertising platform; engineered proprietary global content broadcast and delivery network; supported state-of-the-art and cutting-edge technologies for live broadcast and capability-adaptive viewing of ultra-high-definition multi-angle video and many-channel audio

Chaturbate, L.L.C., Irvine, California: Feb 2014 – Jun 2014; Software Engineer. helped develop high-bandwidth live video streaming and multimedia-enabled chatting website; developed novel user feedback and performer rating system; integrated customer-facing billing and accounting system

Bitcoin & Namecoin Projects, Hudson, Florida: Dec 2010 – Feb 2014; Software Developer, Market Maker/Trader. produced OpenBSD adaptation of Bitcoin Core server software; personally conducted thousands of private-party cryptocurrency/fiat trades with hundreds of customers while maintaining a 100.0% satisfaction rating, totaling over \$1MM in value; pioneered domestic cryptocurrency market, exploring jurisdiction and expanding legal regulatory framework; consulted United States Federal Bureau of Investigation and Department of Homeland Security regarding blockchain technology, public ledger analysis and practical applications/limitations of proof-of-work as a distributed consensus convergence process; produced and currently maintain FreeBSD adaptation of Namecoin Core server and graphical wallet software

Tracers Information Specialists, Incorporated, Spring Hill, Florida: Jul 2010 – Dec 2010; Software Developer. maintained and extended in-house data warehousing systems; discovered and implemented novel techniques of data normalization, integration, aggregation and verification

ZA Productions, Limited, Phoenix, Arizona: Jun 2007 – Nov 2008; System Architect. devised, developed and configured audio recording and production studio startup business; provided ongoing consultation and staff training through rapid initial expansion

United States Department of Commerce International Trade Administration, Miami, Florida: Oct 2006 – Jun 2007; Software Engineer. developed application for statistical analysis and visualization of data from numerous commodities exchanges with online realtime collaboration capabilities for rules and presentation with tiered permissions, version control and release management

Universal Pictures Company, Incorporated and Michael Mann Productions, Universal City, California: Jun 2005 – Dec 2005; System Architect/Administrator. provided technical consultation, network engineering and electrical engineering for production of Miami Vice, a 2006 motion picture, on location in Miami, FL; installed and administered resilient multipath gigabit ethernet networks and fibre channel SANs; implemented outdoor network with roamable wireless cells and adaptive multipath wireless mesh infrastructure including QoS; implemented premises security using tamper evident audio/video surveillance with digital transport and cryptographic stream coherence from wired and solar powered wireless nodes; administered internal mail server and supported users of numerous Macintosh workstations and file servers

Measurable Results, Limited, New York, New York: Mar 2003 – Feb 2004; Software Engineer. provided strategic planning and system programming for exclusive client, J.P. Morgan Chase, home finance division in Columbus, Ohio; led a team of seven programmers; created new internal business applications and upgraded various legacy applications, maintaining compatibility with numerous interdependent subsystems while increasing system capacity and scalability and eliminating downtime

B9 Media, Limited, Toledo, Ohio: 1998 – Mar 2003; Software Engineer, System Administrator. provided programming for a variety of web-accessible and stand-alone applications for clients including Borders, COSI and Wells Bowen Realty

Hanson Productions, Incorporated, Toledo, Ohio: 1997 – 1998; Software Developer. provided application programming and audio/video production for clients including Owens Corning and General Motors

REFERENCES: will be furnished upon request