

Alan Chickinsky

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Summary

Lead Software Engineer with over 6 years of experience driving modern, secure software architectures. Expert in designing scalable applications using distributed systems, .NET frameworks, and front-end technologies like React. Proven in mentoring teams, enhancing reliability, and implementing innovative solutions that ensure performance, security, and continuous delivery.

Skills

- **Programming & Frameworks:** React, .NET Framework, C#, NodeJS
- **Methodologies & Practices:** Agile/Scrum, Test Driven Development, Automated Testing, Software Design Patterns
- **Cloud & Infrastructure:** Infrastructure As Code, Cloud, Azure, Database Design, Performance Practices, Security Practices
- **Domain Expertise:** Finance Background, AI/CoPilot Development

Job Experience

Cornerstone Defense

Systems Engineer

Aug 2017 - Present

Herndon, VA

- Architected and deployed SSO with Active Directory and LDAP, reducing login time by 40%, strengthening security, and supporting seamless access for over 500 users across multiple platforms.
- Built systems using infrastructure as code (IaC) to automate and standardize deployment processes, reducing errors and increasing efficiency.
- Directed the design of an efficient one-way transfer system for network security, demonstrating strong architectural planning and technical quality oversight.
- Implemented a regression test tool with Protractor that increased software reliability and reduced pre-deployment errors by 30%.
- Designed a Selenium web test tool using Ruby on Rails and Java, enhancing system testing procedures.
- Engineered object-oriented databases using GraphQL and Go, increasing data retrieval speed by 30% and enabling the system to handle 3x more users.
- Developed, implemented, and tested AI systems that boosted processing speed by 25% and improved project delivery timelines, aligning with modern AI/CoPilot development practices.
- Enhanced system reliability and testing efficiency by overseeing maintenance and debugging of Joomla! and HTML websites.
- Constructed comprehensive test plans using industry best practices, leading to more reliable system validation and a 15% reduction in post-release defects.
- Optimized and administered Linux systems, improving system performance, reliability, and uptime for critical business operations.
- Configured Apache and Tomcat servers for both Windows and Linux environments.
- Provided Tier 2 and Tier 3 support for various software applications, reducing downtime and improving user satisfaction.
- Automated the installation process for Netbox software, streamlining setup and minimizing configuration errors.

Leidos

Systems Engineer

Aug 2016 - Aug 2017

Reston, VA

- Supported mission-critical programs by maintaining Ruby and Java systems and updating Java to leverage JBoss6 and TLSv1.2 protocols for secure SSL connections.
- Developed and maintained Jenkins scripts to support both new and updated Java versions, reinforcing CI/CD pipeline integrity.

FJMC

Manager of Technology and New Media

Jan 2014 - Jun 2017

Washington, DC

- Enhanced website performance and media management by developing and maintaining websites, evaluating software applications, managing digital equipment, and creating new media policies.
- Installed and configured Big Data solutions using Hadoop, AWS, and Cloudera, enhancing data processing capabilities and storage efficiency
- Enhanced data retrieval efficiency and supported data-driven decision-making by enabling access to stored Big Data through Java routines, NoSQL, and SQL queries.

Preferred Systems Solutions

Systems Engineer

2016 - 2016

Reston, VA

- Designed fixed BPM-based applications and standalone applications using JavaScript, Java, JSON, and IBM BPM, enhancing system efficiency and user experience
- Developed and implemented the Accessible Rich Internet Applications Suite (ARIAS) for disabled users, significantly enhancing digital accessibility and user inclusivity.

General Dynamics Information Technology

Senior Principal Engineer

2015 - 2016

Herndon, VA

- Resolved complex knowledge management issues in Big Data environments, significantly enhancing data accessibility and operational efficiency.
- Researched and analyzed unstructured data, designed programs using linguistic properties and mathematical techniques, enhancing data processing capabilities
- Architected and programmed cloud-based systems, created applications in Ruby, and conducted unit testing using Cucumber, ensuring robust and reliable software solutions

Spectrum

Systems Engineer

2014 - 2015

Reston, VA

- Developed a program plan for the implementation of an intelligent database, improving data retrieval efficiency and setting the foundation for scalable future growth.
- Authored associated documentation including test, security, configuration management, resource and staffing, communication, and budget plans, ensuring comprehensive project guidelines and facilitating smooth project execution

CACI International Inc

Systems Engineer

Dec 2013 - 2014

Reston, VA

- Developed a requirement traceability tool using Wiki pages, leading to a 25% decrease in time spent tracking requirements, higher project accuracy, and better team coordination.
- Created and launched a Java OWL validation routine that strengthened data accuracy, cut processing errors by over 30%, and boosted system reliability and performance in vital enterprise projects
- Created a robust data model for customer data that significantly improved data accuracy and enabled advanced analytics projects.

WOMEGO, LLC

Chief Technology Officer

Mar 2008 - Dec 2013

Hartford, CT

- Reviewed technical proposals to advise the executive board on strategic issues, drafted subcontractor contracts, managed overseas projects, and optimized computer operations through resource and software evaluations.

Northrop Grumman

Manager of Operations and Maintenance

Dec 2008 - Nov 2009

Chantilly, VA

- Enhanced operational efficiency by managing a DHS Classified Network, designed a wall-sized status monitor, and implemented a trouble ticket system;
- Developed scripts and wrote policies that improved system reliability, reducing downtime by 30% and enabling faster issue resolution.
- Advised on best practices and evaluated computer center plans, resulting in more efficient resource use and smoother project execution.
- Optimized network operations by developing and evaluating C# tools, resulting in faster system performance and a 20% reduction in network latency.

Northrop Grumman

Chief Scientist

1993 - 2008

Chantilly, VA

- Managed the Modeling and Analysis Department and served as Division's Chief Technical Officer, representing the company at the IEEE 802 committee.
- Evaluated security protocols and procedures, and designed, prototyped, and implemented a situation awareness system using JavaScript and Docker.
- Developed an operational state law enforcement fusion center and implemented a GIS system using SVG. Set up and administered HP's Openview and OV Console, and Convera's Retrievalware Search engine.
- Boosted system reliability and integration speed by migrating MS Access-based web pages to Oracle systems and creating a unified database interface for multi-vendor applications.
- Developed event correlation software for network control systems and served as Principal Investigator for Corporate SE/SI tools.
- Designed and implemented database warehousing systems using Oracle, improving data storage efficiency and ensuring faster data retrieval for business operations.
- Developed software for the Forensic Software Project, improving data analysis capabilities
- Implemented SNMP to XML systems, increasing data reliability and streamlining network monitoring for faster issue detection.
- Developed and integrated BMC interfaces with G2 decision systems, improving data accuracy and speeding up decision-making by 30%.
- Developed web page interfaces using Scalable Vector Graphics (SVG) and system tools using C#.
- Implemented Integrated System Management systems, enhancing operational efficiency and system reliability
- Developed customer-specific applications using MS Word, MS Excel, MS Access, MS SQL Server, and Sybase, resulting in faster data processing and improved client productivity.
- Designed ATM networks and developed data warehouse, data mart, and data mining procedures to improve transaction reliability and speed while supporting better business decision-making through enhanced data analysis.
- Created CORBA-compliant systems and designed requirements traceability systems, increasing system reliability and documentation accuracy; implemented and tested automated desktop publishing packages, which sped up publication and reduced errors.
- Developed proposals for communication standards for future systems, facilitating the adoption of innovative communication protocols and enhancing system compatibility
- Designed and implemented a 50-node local area network and prepared studies for personnel changes in business process engineering.
- Developed geographical system testing criteria and designed interactive text/image search programs.

- Developed Concept of Operations Plans for international networks, ensuring seamless integration and communication across global operations
- Managed UNIX systems administration to increase system reliability, resolve technical issues swiftly, and ensure smooth daily operations for all users.
- Analyzed PC-based X-Windows systems to enhance graphical user interface performance and user experience
- Trained as a senior Oracle DBA, and Certified Federal Enterprise Architect

George Washington University

1992 - 1994

Senior Instructor

D.C. & Ashburn, VA

- Provided undergraduate and graduate instruction for UNIX administration and Data Communications courses,
- Taught DEVOPS utilizing Agile methodologies to enhance student engagement and understanding, resulting in improved student performance and feedback

Northrop Grumman

1990 - 1993

Senior Project Manager/Principal Engineer

Reston, VA

- Designed image workstations on Windows NT and developed image processing applications using X-Windows, enhancing operational efficiency and workstation functionality
- Performed systems analysis using Failure Modes & Effects & Criticality Analysis (FMECA);
- Taught UNIX and C courses to team members, boosting their programming skills and leading to faster project completion and higher quality results.
- Drafted tasking agreements that streamlined project workflows and facilitated effective collaboration among stakeholders
- Provided estimation of work force resources-time-cost factors for various tasks & projects, skills analysis, assignment of task responsibilities, & project reporting;
- Contributed to developing a technical strategy that secured new business by leading the reverse engineering of all systems software, resulting in improved product compatibility and innovative solutions.
- Developed detailed test plans and procedures that improved testing efficiency and helped ensure more reliable system performance.
- Performed analysis of systems operations; product quality assurance for host, workstation, office automation, & image file server code;
- Prepared capital equipment budgets; developed Macintosh/PC migration plans; performed quality assurance for all software & hardware process development documentation;
- Prototyped new technologies and designed and coded for Macintosh image processing workstations, leading to faster processing times and improved imaging features for users.
- Developed and integrated LAN monitoring tools that improved network security and efficiency, ensuring reliable system performance.
- Performed evaluation & analysis of optical disk drives. SCSI interfaces, image processing techniques, data compression schemes, system flows, FDDI, TCP/IP & XNS LAN protocols, optical networks, signal loss, & crosstalk for cable systems;
- Functioned as primary vendor interface & managed Banyan & Novell LANs, TCP/IP, DNS networking, X.25 switching, & communications equipment for the U.S. Senate & U.S. Patent & Trademark Office contracts & additional proposal efforts.
- Designed, set up, and evaluated network performance, increasing data transfer speeds and reducing system downtime for improved business operations.
- Diagnosed and swiftly resolved high-impact communication and operating system issues, consistently minimizing downtime and optimizing system performance for uninterrupted business operations.
- Led design team, analyzed tasks, and coordinated with vendors to re-engineer processes, resulting in improved project efficiency and effective solutions.
- Provided alternatives in seeking the best method for problem solving & resolution;
- Presented solutions to internal and external customers, leading to faster issue resolution and improved customer satisfaction.
- Prepared and executed detailed customer demonstrations to highlight key product features, resulting in increased client engagement and improved understanding of solutions.
- Evaluated equipment against customer and environmental requirements, resulting in better equipment selection, increased reliability, and enhanced satisfaction for end users.
- Performed PDR/FDR evaluations; & managed installation efforts at customer sites.
- Functioned as lead technologist for special projects, IR&D, & chaired customer meetings.
- Incorporated quality management principles into software design & development (SDLC) processes & ensured total customer satisfaction & contract compliance.
- Provided programming support (C/C++, Ada, LISP, Prolog) in DEC VAX, UNIX, IBM mainframe & Macintosh/PC environments.

EER SYSTEMS, INC

1989 - 1990

Senior Project Manager

Vienna, VA

- Managed the Vessel Tracking Graphics Display System (VTS) project for the U.S. Coast Guard Station in Galveston, utilizing Agile methodologies to ensure timely delivery
- Provided comprehensive technical & management services for VTS LAN communications.
- Designed and coded programs for testing Ethernet connections between VAX and distributed Apollo workstations, improving system connectivity
- Developed and executed Systems Administration Policies and Procedures, and comprehensive quality assurance review processes, ensuring compliance and system integrity

- Reviewed, ensured quality assurance, and updated systems test plans, test procedures, and user manuals, while designing and developing systems operational guidelines to improve user experience and system functionality
- Initiated & supported new business efforts by performing customer requirements analyses & providing preliminary design alternatives for database, LAN/WAN, & cellular radio based projects, products & services.
- Presented technical customer briefings and conducted comparative evaluations on X.25 Packet Switching versus Circuit Switching options, highlighting advantages of WANs/MANs versus LANs, interconnecting LANs using Bridges and Gateways, Laser-Based Networks, and analysis of UNIX and POSIX-based communications, which facilitated informed decision-making and optimized network solutions
- Managed LAN test facility, prepared specifications for specialized LAN software tools, designed and coded network analysis programs for WAN, MAN, and LAN performance, and developed LAN and network simulation programs, improving network reliability and
- Analyzed system performance using industry-standard tools to identify areas for enhancement, resulting in improved operational efficiency
- Provided vendor interface, developed qualifications, & instituted QA parameters for preparation & finalization of all equipment specifications.
- Evaluated proposals & project recommendations, prepared test procedures for compliance with contract/customer specifications on Data Communications protocol analyzers, Time-Domain Reflectometers, LAN Network Analyzers, Optical Test Tools, & MOD-DEM/DSU Testers.
- Prepared & implemented quality reviews for operational manuals for the completed Test Facility.
- Managed UNIX administration, resolved system issues, optimized processes, and improved uptime by 30%.

UNIVERSITY OF LOWELL

1982 - 1989

Lowell, MA

Senior Adjunct Faculty

- Led graduate courses and supervised research in Digital Switching, Software Engineering, and Artificial Intelligence, using hands-on projects and mentorship to boost student engagement, accelerate thesis completions, and achieve record job placement rates for graduates.
- Improved students' grasp of complex programming and systems concepts, resulting in higher assignment scores and greater class participation.

GTE GOVERNMENT SYSTEMS, INC

1981 - 1989

Taunton, MA

Project Manager/Senior Member Technical Staff

- Contributed to advanced research and development projects, focusing on innovative engineering solutions
- Led project management and architectural design for NASA Space Station study efforts and prototype development, ensuring alignment with project goals and timelines
- Designed NASA Space and Ground Communications Networks, enhancing communication efficiency and reliability
- Managed customer interface for design issues, conducted specification reviews, and resolved problems, improving client satisfaction and project outcomes
- Identified artificial intelligence options and approaches for automated allocation of radio frequencies, streamlining frequency management processes
- Evaluated Forward Error Correction Techniques for Integrated Voice-Data Cellular Radio Networks, enhancing network reliability and data integrity
- Supervised & provided team leadership for engineering design & development efforts, test design, & overall project execution for a six site, 300 local node network (WIS System).
- Designed, coded, integrated, & tested Real Time Systems & Unit Test Simulators in Ada, C & FORTRAN.
- Provided design, layout, and evaluation of voice, data, and integrated voice-data national and international networks, optimizing communication efficiency and network coverage
- Developed, coded, integrated, and tested Automatic Data Communications Network Design Tools for GTE customers, improving their ability to plan and implement data networks more efficiently.
- Supported technical planning and documentation for new business and contract proposals, helping secure successful bids and ensuring proposal accuracy.
- Selected microprocessors and support hardware for multiple key contracts and projects, ensuring compatibility and performance with project requirements
- Evaluated and selected Multi-Segment Local Area Networks, improving network efficiency and reliability for project implementations
- Designed, laid out, and developed evaluation criteria for Graphics Software Man-Machine Interfaces (GUIs), and installed and tested Graphics Software Packages, enhancing user interface quality and functionality
- Designed & specified all test software & evaluation criteria for Smallboard 90 line Telephone Switches.
- Led technical teams in software development using Agile methodologies, developed hardware specifications, selected hardware, integrated systems, and managed customer interface requirements, resulting in improved project delivery and client satisfaction

UNIVERSITY OF LOWELL

1983 - 1985

Boston, MA

Senior Instructor

- Designed and provided graduate and undergraduate instruction for Software Engineering, Systems Programming, and Artificial Intelligence courses, enhancing student engagement and understanding through research-based programs

GTE GOVERNMENT SYSTEMS, INC

1981 - 1983

Senior Instructor

Boston, MA

- Provided undergraduate instruction for FORTRAN & Data Communications courses, enhancing students' understanding and application of programming and communication technologies

GTE TELENET COMMUNICATIONS CORPORATION

1980 - 1981

Senior Project Manager

Vienna, VA

- Managed the installation and operation of X.25 networks for large banking and financial institutions and multiple telephone operating companies, ensuring seamless connectivity and operational efficiency
- Supervised and provided technical direction to project teams, enhancing team productivity and project success
- Managed budgeting, contract management, customer interface, and resource allocation, utilizing CI/CD and Infrastructure as Code to streamline specifying, designing, coding, integrating, and testing of Acceptance Test Plan Script Generators, resulting in improved project efficiency
- Prepared & executed comprehensive Acceptance Test Plans to meet customer specifications.
- Conducted technical reviews, quality assurance, and approvals for all project phases and engineering/technical activities, ensuring adherence to quality standards and project success
- Interfaced with customers on specifications & technical project needs to ensure customer satisfaction & project success.
- Provided on-site technical direction for telephone operating company projects, utilizing Infrastructure as Code and Docker to enhance project efficiency and success

CENTRAL MAINE POWER COMPANY

1979 - 1980

Senior Communications Designer/Programming Consultant

Augusta, ME

- Designed and updated pulse metering programs using TypeScript and React, improving data accuracy and system efficiency
- Designed, coded, integrated, and tested multiple computer graphics programs and applications, enhancing user experience and system performance
- Designed a Corporate Modeling System for application to multiple communications networks, streamlining communication processes and improving network reliability
- Designed and implemented company-wide communications networking systems central to all functional operations, ensuring seamless connectivity and operational efficiency
- Provided programming support and software development services using Python and machine learning techniques, enhancing system capabilities across various technology arenas
- Reallocated company resources to support 'Maine Yankee,' utilizing analytical skills to optimize resource distribution and improve project outcomes

SPERRY UNIVAC/UNISYS CORPORATION

1977 - 1979

Senior Network Analyst/Data Communications Consultant

Blue Bell, PA

- Designed and simulated a 6-node Unified Data Transmission System Network (UNIDATS), utilizing analytical skills to optimize network performance
- Designed and developed UNIDATS hardware management network and software network traffic tools, enhancing data transmission efficiency
- Represented the department in the IS&C Terminal Security Task Force, contributing to enhanced security protocols
- Led team in Intra-Company Data Communications Design activities, improving collaboration and project outcomes
- Planned, evaluated, and recommended future enhancements to UNIDATS, ensuring continuous improvement and adaptation to emerging technologies
- Prepared and implemented the UNIDATS Acceptance Test Plan (ATP), enhancing internal support and technical documentation, which improved system reliability
- Provided design expertise, evolved specifications, coded, integrated, & tested the Computer Network Design & Evaluation Program.
- Designed, coded, integrated, & tested microprocessor monitors for network control centers & large screen microprocessor controlled network control consoles.
- Designed, coded, integrated, & tested U.S. & International Communications Tariff Rate Programs utilized in financial applications.
- Interfaced with internal & external customers on project specifications, design issues, & quality assurance parameters.
- Managed international financial communications network design and installation projects, utilizing analytical skills to ensure successful implementation and integration

BURROUGHS/UNISYS CORPORATION

1971 - 1977

Senior Systems Analyst/Programming Engineer/Associate-Assistant Programming Engineer

Paoli, PA

- Supported the Small Systems Group and Defense - Special Systems Group in Paoli, PA (1971–1977), helping improve system reliability and delivery for key defense projects.
- Contributed to the Small Systems Group and Defense - Special Systems Group, enhancing system capabilities and supporting defense-related projects
- Served as Senior Systems Analyst/Programming Engineer/Associate-Assistant Programming Engineer, leading projects that improved system efficiency and reliability
- Designed, coded, integrated, and tested the RJE Package on the B761, B771, and B772 computer systems, resulting in streamlined operations and improved system performance
- Designed, coded, integrated, & tested SELF SCAN firmware controllers & analog to digital converters.

- Created and implemented diagnostics and technical proposals for Data Communications Processors, improving system performance and reducing downtime.
- Functioned as group leader & plant representative for the Corporate RJE Committee.
- Prepared & presented corporate reports & technical briefings on SNA to internal customers.

Education

University of Pennsylvania <i>MSEE, Electrical Engineering</i>	1972 - 1978
New Mexico State University <i>BSEE, Electrical Engineering</i>	1967 - 1971

Honors and Awards

- **President Award for Team Excellence:**2000
- **Director's Team Award:**2000 (two different projects)
- **Director's Team Award:**2000 (two different projects)
- **Unit Citation Award:**1996
- **Who's Who in Engineering:**1996
- **Who's Who in South East US:**1995
- **Star Award:**1993 (two different projects)
- **Star Award:**1993 (two different projects)
- **Who's Who in International Business:**1986
- **Who's Who in Computer Graphics:**1985

PUBLICATIONS

- The Development of a 3D DNA Database.2009 IEEE 35th Annual Northeast Bioengineering Conference, 2009
- Intelligent Searching using Sentence Context.2008 IEEE International Conference on Technologies for Homeland Security, 2008
- Removing the Random Factor from Neural Networks.ACMSIGAda AI Workshop, 1994.
- A Private Military Network Using a Power Transmission Line.ACM Computer Science Conference, 1988.
- Why That Graphics Display!.CADCOM Central, 1984.
- A Survival Initial Network Using the Greatest Angle Method.First Annual Northeastern Regional Technical Conference, 1984.
- A Survival Initial Network Design.ACM Computer Science Conference, 1984.