

# LUIS E. ALVARADO

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Dear Hiring Professional:

Please consider this letter of introduction as an expression of my interest in exploring and identifying career employment opportunities with your organization. My résumé is enclosed for your review.

I have over 26 years of professional experience in performance-driven and mission critical environments where I have been instrumental in developing, implementing, and evaluating a variety of systems engineering services to meet the needs of military and civilian clientele. I am a uniquely talented and highly motivated individual seeking the opportunity to utilize my talents and diverse work experience to improve processes and technological performance for your organization. My excellent work ethic and problem-solving skills have enabled me to enhance project performance and respond effectively to emergent and unanticipated demands.

I attribute my success thus far to several key factors: (1) the ability to remain calm and focused in challenging and stressful environments, (2) noteworthy electronic, mathematical and programming skills, (3) an aptitude for evaluating and resolving complex issues, and (4) a propensity for exceeding standards. These skills and traits have served me well in the past, allowing me to make significant contributions to the achievement of organizational objectives and complex engineering goals. With a solid record of accomplishment behind me, I am confident I can do the same for you.

I would be very interested in speaking with you to explore how my skills, strengths, and experience can benefit your organization. Thank you for your attention, kind consideration, and forthcoming response.

Sincerely,

Luis E. Alvarado

Enclosure

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## SUMMARY OF QUALIFICATIONS

Highly disciplined and solutions-based professional with over 26 years of Systems Engineering and Management experience seeking to combine proven electrical engineering and computer science expertise with organizational and team-building talents. Mathematically adroit and highly skilled at generating and testing proprietary control programs and novel algorithms. Excellent problem solving and multitasking skills. Readily assume technical leadership and accountability for successful completion of complex projects. Possess outstanding oral and written communication skills and the ability to quickly establish rapport with staff members at all levels.

### CORE COMPETENCIES:

- Systems Engineering
- Control Systems
- Staff Leadership
- Data Analysis
- Signal Processing
- Physics / Aerodynamics
- DME/GPS Navigation
- Team Building
- Artificial Intelligence
- Satellite Data Processing
- Strategic Planning
- Modeling & Simulation

*Hold current Secret Security Clearance  
Articulate fluency in English and Spanish*

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## PROFESSIONAL EXPERIENCE

### **SENIOR SYSTEMS ENGINEER ICE CORPORATION**

**2008 - Present**

**White Sands Missile Range, New Mexico**

- Senior Systems Engineer accountable for testing and certification of Target Control System; manage development of path-planning algorithms, software systems and testing, and validation procedures; direct, monitor, and assist programming; assist writing and verify accuracy of documentation.
- Function as principal Control Engineer developing the Ground Target Vehicle Control System; utilize analysis and mathematical models to predict and measure outcome; ensure compliance with performance and safety requirements in all aspects of program design features.
- Consult with engineering staff to evaluate interface between hardware and software; develop specifications and performance requirements; author papers for new project valued at \$3M+.

### **PRINCIPAL CONTROL ENGINEER / MANAGER / SYSTEMS ENGINEER DRONE FORMATION CONTROL CENTER**

**1985 - 2008**

**White Sands Missile Range, New Mexico**

*Proteus Corporation*

*1996 - 2008*

*Coleman Research Corporation*

*1990 - 1996*

*IBM Federal Systems Division*

*1985 - 1990*

- Provided senior Control and Systems Engineering oversight for three federal funded corporate contractors; designed, developed, tested, and documented software used in simulation, navigation, guidance, and control of target drones; utilized custom operating systems for batch processing and real-time operations on scalable supercomputers.
- Led project for integration and flight-testing of drone targets; supported development of ground control systems; developed novel terrain following, artificial intelligence-based path finding, and motion detection algorithms.
- Developed mathematical models for aircraft control and navigation systems; supported DFCS operational missions including assessing mission requirements, defining required systems modifications, and evaluating system performance.

## PROFESSIONAL EXPERIENCE (Continued...)

**SYSTEMS ENGINEER****1980 - 1985****IBM FSD / SATELLITE SURVEILLANCE SYSTEMS****Westlake, California**

- Managed project concerning multistage processing of infrared satellite surveillance data; analyzed system requirements and software specifications; authored technical change proposals and system specifications.
- Conducted statistical and probability studies; assisted development of custom background data discrimination algorithms; simulated missile threat scenarios and evaluated system performance.

## OTHER PROFESSIONAL EXPERIENCE

**CONSULTANT****2007****ENTERPRISE INFORMATION SYSTEMS****White Sands Missile Range, New Mexico**

- Provided consultation and served as member of the oral presentation team during bid of the TEAS Contract worth \$200M+.

**GS12-10 MATHEMATICIAN****1996****U.S. ARMY REAL TIME CONTROL SYSTEM****White Sands Missile Range, New Mexico**

- Designed, implemented, and tested real-time software for accurate and reliable displays and data products for various range missions; analyzed real-time processing requirements and applied appropriate mathematical analysis and modeling techniques.

**COLLEGE INSTRUCTOR****1993 - 2000****DOÑA ANA COMMUNITY COLLEGE****White Sands Missile Range, New Mexico**

- Provided instruction on algebra, analytic geometry, and calculus to students at branch campus.

## EDUCATION

**University of Texas at El Paso, El Paso, Texas**

Master of Science in Electrical Engineering

Bachelor of Science in Electrical Engineering

## PROFESSIONAL TRAINING

**Kansas University, Lawrence, Kansas**

Digital Flight Control Systems

Conceptual Design of UAV Systems

Aircraft Dynamics and Flight Control Systems

Advanced C++, Visual Basic, and Networking TCP, El Paso Community College, El Paso, Texas

GPS Fundamentals, Applications, Analysis, and Simulation, NAVTECH, Alexandria, Virginia

IBM Systems Engineering Principles and Practices, Gettysburg, Maryland

IBM Software Workshop, UNIX, and C, Denver, Colorado

## PROFESSIONAL AFFILIATIONS

Mexican American Engineering and Scientists

American Institute of Aeronautics and Aerospace

National Defense Industry Association