13523 Cahill Ln, Cypress, TX, 77429 · <u>gigs94@gmail.com</u> · 703·595·1234

SCIENTIFIC ENGINEER

Career objective: To develop innovative products and approaches to impossible problems.

Employment History

Technical Director Decernis Oct 2016-Present

Decernis

- Report to CEO and COO on progress and issues with the entire technology suite. In charge of product development for a suite of regulatory compliance products.
- Worked with SMEs and customers to ensure that products contained features that were valuable to the end users.
- Managed global development staff using scrum/agile methodologies. Created a new regulatory compliance product. Lead efforts to coordinate multiple products together to create a seamless product and experience for the user.
- Vendor management and contract negotiations for offshore development teams
- Interfaced with customers technical teams to meet goals and expectations
- Designed infrastructure architecture to enable easy deployment of services in different cloud environments including AWS and OVH.
- In charge of development issue triage to determine if reported issues were development, infrastructure or configuration issues.
- Developed automation pipeline data ingress
- Created algorithms to enhance data capture and data synergy.
- Hands on python, js, java development and DevOps. Agile/Scrum development methodologies, agile tools: Jenkins, Jira, Docker, git, sharepoint, trello, sentry, zabbix
- Worked on machine learning algorithms to collate news relevant news articles into various categorical and determine trends within the data.
- Big data processing, ETL, and normalization
- Cloud computing architecture design, implementation, troubleshooting and Network design

Lead Software Developer IBM Cloud Mar 2015-Oct 2016

IBM

- Lead a group of engineers on the Virtual CMS project to re-architect a highly coupled management stack for integration and installation in various datacenters.
- Lead a group of software developers to create new infrastructure management tool with goal of
 cost reduction. Consolidated manual processes and spreadsheet data into online tool that
 allows data access, modification and support work flow automation. Utilized Meteor code on
 node.js platform. Used DevOps CI/CD.

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- Lead a team of software developers to create a Patching Service for AMM. Implemented a SOA
 design that used native update mechanisms to effectively give users access to patches needed
 on all their machines, allow them to schedule patch deployment, and apply patches
 automatically. Globally distributed team in US and India. Used DevOps CI/CD model.
- Lead globally distributed teams and coordinated work in non-overlapping timezones (Singapore, India, Romania, Germany, UK, and US)
- Participated in IBM's DevOps Leadership Training and developed proficiency with the IBM garage method for problem resolution
- Responsible for stakeholder interactions while managing customer and management expectations, designing requirements, giving technical direction, and mentoring junior staff.

Scientist/Engineer

Cyber Security Business Unit

2008-Mar 2015

Raytheon BBN Technologies

- NASA NIAC Fellow and Principal Investigator for a novel concept to eliminate space debris using vortex guns shot from the upper atmosphere. Worked with University of Michigan professor Aaron Ridley and his GITM model to establish a simulated environment of the upper atmosphere to study the forces needed to affect space debris. One of 24 awarded grants for \$100k.
- Product manager responsible for transition of a DARPA program, liaising with multiple customers to implement transition, supportability, effectiveness requirements, and technical specifications into the last phase of the program. Responsible for setting release schedule and determining features needed in each release to support customers' needs. Installation and operational support of systems at customer sites.
- Successfully lead a mobile application privacy research testbed project with 12 scientists. Conducted briefings and coordinated with customer to prioritize and maintain changing goals. Mentored junior engineers in architecting complex software systems, and in robust development and testing practices, configuration management, and reverse engineering. Developed novel operational prototype applications for establishing robust user privacy and anonymity. Responsible for technical planning, systems integration, and verification/validation.
- Developed state-of-the-art implementations to research security aspects of network protocols for geolocation, delayed tolerant networking, and IPv6.
- Co-author and instructor for an advanced internal Python training course focusing on specialized package use in novel research applications including advanced data analytics and high-performance computing. Developed course was multi-modal consisting of a collaborative website, course materials, and specially constructed development projects. Taught to over 100 students representing nearly 12% of the organization.
- Patent development. Patent 8657235 -- <u>Space debris removal using upper atmosphere and vortex generator</u>. Application 20130306799 -- <u>Space debris removal using upper atmosphere</u>. Application <u>Bimodal pedal</u>
- Quality of Life Task Force member responsible for work-life social activities and company survey.
- Selected to participate in a 6 month internal leadership program focused on developing key management and leadership skills for effective leadership.

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Senior Engineer II Fraud Detection 1996-2008

Verizon Business

- Designed 300M records/day data mining application requiring multi-terabyte disk arrays accessed by multiple servers in a write/write configuration
- Saved the company \$1.5M in yearly revenue by rewriting a database application in MySQL, in annual upgrade and maintenance fees while improving performance by a factor of 100.
- Lead on fraud prevention for a 5-person development team. Developed a configurable datareduction system to analyze network traffic, determine fraudulent activity and report those conditions to analysts. Developed fraud-detection algorithms in C++ with rigorous application of design patterns throughout the system. Designed and implemented a process improvement plan that enabled the team to cut development cycles in half while dramatically improving software quality.

Engineering Programmer

Flight Dynamics Planning and Analysis

1995-1996

Lockheed Martin

- Developed operational systems used by NASA for International Space Station flight operations to plan and estimate resource requirements and flight plans for the first flights of the ISS:
- Modeling simulation software to determine flight dynamics of ISS with various configurations to ensure that each build out phase of the station was dynamically stable.
- Planning software for fuel and resource consumption on the international space station required for shuttle resupply estimates.
- Target trajectory LOS estimates for ground antennas as well as multi-body dynamics ephemeris data and micro-g analysis.

EDUCATION

Master of Science in Computer Science
Colorado Technical University, Colorado Springs, CO
Bachelor of Science in Mechanical Engineering
Texas A&M University, College Station, TX

1999
Emphasis in telecommunications
1994
Emphasis in gas dynamics

RELEVANT TECHNICAL SKILLS

(no)SQL: Postgres, solr, mongodb, mysql, oracle	Security	Python	Linux/OSX
Problem Formulation	Validation & Verification	C/C++	iOS/Android

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Product Enhancement	Technical/Scientific Documentation	Perl	Java
Intellectual Property Development	Customer Relations	Embedded Programming	Agile/Scrum
Cloud Development and DevOps	Docker, Chef, Salt	js node.js	SoftLayer/AWS/OVH
Statistical analysis, data mining	VLDB administration and development	Grid processing	Data warehousing

HONORS AND AWARDS

- Alien Encounters, Season 3. Scientific advisor for space debris physics. Appeared in 3 episodes.
- 2016 IBM Business & Technical Leadership Member

REFERENCES

- Olsen, Jackie, Senior Manager, IBM
- Schultz, Kristi, STSM, IBM
- Edmison, Joshua, Ph. D. Northrop Grumman
- Mergen, JF, Chief Scientist, Raytheon BBN Technologies
- Everett, John, Ph. D., Deputy Director 120, DARPA

Contact information available upon request