LUAT (LUKE) NGUYEN

Mobile: 408-493-3369 | ✉ luattn@gmail.com

CORE COMPETENCIES

- **Strategic Business-Technology Alignment** – Translating business objectives into technology roadmaps.
- **Stakeholder Engagement & Relationship Building** – Trusted advisor to senior leadership and cross-functional teams.
- **Product Management & Strategy** – End-to-end product lifecycle, agile methodologies, and digital innovation.
- **AI/ML & Data Analytics** – Expertise in AI/ML tools, data analytics, and cloud platforms (AWS, Azure). Skilled in deploying AI to automate R&D workflows, generate insights, and drive business value, enhance decision-making and product outcomes.
- **Cloud & Infrastructure**: Extensive experience with cloud architecture (AWS/Azure), infrastructure management, data security, and risk management within regulated environments (GxP, non-GxP).

WORK EXPERIENCE

September 2024 - Present
Senior (R&D) Infrastructure Engineer (4D Molecular Therapeutics, Emeryville, CA)
Reporting to the Head of IT Infrastructure, Operations, and Security:

- Partnered with senior leadership to align IT infrastructure strategy with R&D and clinical manufacturing objectives, ensuring a robust and scalable (GxP and non-GxP) digital ecosystem.
- Developed and implemented a strategic roadmap for vulnerability management using Tenable, Druva/Acronis, SentinelOne, Tanium, SolarWinds, and Guardicore, enhancing security and operational efficiency.
- Drove the integration of advanced cloud-based solutions and automated workflows, improving scalability, reliability, and data integrity.
- Acted as the primary liaison for IT operations, collaborating with stakeholders to resolve issues and optimize system performance.

January 22 – March 2024
Senior Specialist, Product Analyst, Technical Product Management (Merck, South San Francisco, CA)

- Led cross-functional collaboration to align the product model with Merck Research Laboratory (MRL)'s global strategy.
- Defined and executed technology roadmaps for systems integration, solution design, and operational strategy.
- Spearheaded the initial product analysis for the **eROP (enhanced Research Operation Plan)** as part of an AI/ML acceleration program, earning an INSPIRE Award for driving innovation.
- Streamlined system image and software deployment, improving operational efficiency and reducing manual effort.
- Received 25 INSPIRE awards (2017 - 2024) for contributions to strategy, cross-functional collaboration, innovation, and leadership.

October 17 – December 2021
Senior Specialist, Business/Tech Analysis, Discovery Research IT (Merck, South San Francisco, CA)
As the sole on-site Merck IT lead, directed the development and implementation of business-aligned IT strategies, site policies, and best practices to ensure seamless alignment with organizational goals.

- Delivered comprehensive IT support for site relocations, infrastructure upgrades, decommissioning activities, and data management (compute/storage/backup), while adhering to security best practices.
- Enhanced user autonomy by creating and maintaining comprehensive knowledge base articles, user guides, and training materials, fostering innovation and adoption.
- Collaborated with diverse IT teams and business stakeholders to gather requirements and deliver IT solutions that improved user productivity and supported organizational growth.
- Led the development and deployment of a cross-functional, cloud-based application to centralize research equipment management, utilizing Microsoft SharePoint, Teams, and Power Automate.
- Served as a member of the South San Francisco MRL Extended Leadership Team (XLT), contributing to the development of a unified site culture and fostering an enterprise-wide leadership mindset.

March 14 – February 17
Senior Business Analyst, Drug Discovery Systems (Pfizer/Medivation, San Francisco, CA)
Served as go-to person driving strategic IT partnerships in Research, Informatics, and AI/ML

- Spearheaded technology and business convergence through comprehensive planning, innovative solution design, and forward-thinking strategies that drove excellence
- Shielded end user devices and data with robust security measures, including encryption and access controls, fostering trust and reliability
- Led and coordinated projects from initiation through deployment
  - Served as BA for in-house database-driven (agile) application development and COTS deployment. Recognized for IT Excellence & Innovation enterprise application development
  - Coordinated the support for the Next Generation Sequencing (NGS) environment. Ensured compliance with regulatory requirements and industry best practices

May 11 – February 13
Informatics Associate, Project Management (Evotec, South San Francisco, CA)
Led Research IT/informatics engineering, building scalable data pipelines, ETL processes, and workflows to support scientific research.

- Developed custom database queries, ETL processes, and web applications in collaboration with cross-functional teams, enhancing user experience.
- Maintained high-quality data management through QC and analysis, supporting sample management and application development.

September 03 – June 09
Computational Research Specialist, Modeling & Informatics (VM Discovery, Inc., Fremont, CA)
Transformed drug discovery by pioneering data-driven insights, delivering tailored IT/informatics solutions that empower researchers, and leading innovative data analytics initiatives to optimize workflows, ensure seamless user experiences, and build scalable infrastructure for accelerating small molecule therapy research and scientific breakthroughs.

- Pioneered first-in-class treatments with patents US8586619B2 and US60/894,368, that helped spin-off VM Therapeutics LLC, VM Pharma LLC, and VM Oncology LLC
- TrkA program successfully exited to Purdue Pharma for up to $213 million and secured up to $2 million in NIH grants for the PKC Epsilon program, fueling innovation and growth

February 02 – February 03
Research Scientist, Membrane Biology (Proteomic Systems, Inc., Sunnyvale, CA)
Planned, executed, and analyzed fluorescence-based assay experiments to validate micro-arrayed MembraneChip technology (US6699719B2).

- Designed and conducted fluorescence-based assays to evaluate MembraneChip performance
- Collaborated with cross-functional teams to refine technology and resolve technical issues
- Analyzed experimental data to inform optimization of the MembraneChip platform and contributed to publication in a peer-reviewed journal.

February 00 - October 01
Research Scientist, Computational Modeling/Chemistry (ArQule, Inc., Menlo Park, CA)
Designed and implemented informatics solutions, leveraging data mining and algorithm development to optimize ADMET (Absorption, Distribution, Metabolism, Elimination) predictive models.

- Developed novel algorithms for predicting binding affinity (P450 2C9 enzyme-binding data).
- Implemented conformational search modules to improve molecular conformations and reduce false positives in pharmacokinetic simulations.
- Seamless integration of new methods into MOE (Molecular Operating Environment) software enabled seamless workflow integration, automation scripts for complex data analysis were developed, streamlining research processes and reducing manual errors, molecular descriptors were created to build predictive models, enhancing model accuracy and interpretability.
- Data Analysis & Visualization : Intuitive visualizations and reports were designed to facilitate data exploration, discovery, and decision-making, data visualization tools were utilized to create interactive dashboards for real-time analysis and feedback.

EDUCATION

B.S. in Biochemistry/Chemistry - University of California, San Diego (Revelle College), 1999
Area of Focus Requirement: Economics & Computer Science

UCSD Computer Science Coursework:

- Introduction to Computer Science (C++)
- Basic Data Structures and Object-Oriented Design (C++)
- Introduction to Discrete Mathematics
- Mathematics for Algorithm and Systems
- Computer Organization and Systems Programming (Assembly Language)
- Advanced Data Structures (C++)
- Introduction to Artificial Intelligence: Search and Reasoning (Common Lisp)
- Chemistry & Computer Programming (C++)

MOOC Coursework/Certificates:

- Introduction to Responsible AI, Google, Coursera
- Introduction to Large Language Models, Google, Coursera
- Introduction to Generative AI, Google, Coursera
- Advanced React, Meta, Coursera
- Programming with JavaScript, Meta, Coursera
- HTML and CSS in depth, Meta, Coursera
- Introduction to Front-End Development, Meta, Coursera
- Introduction to Back-End Development, Meta, Coursera
- Introduction to Mobile Development, Meta, Coursera
- AWS Fundamentals: Addressing Security Risk, Amazon Web Services (AWS), Coursera
- AWS Fundamentals: Going Cloud-Native, Amazon Web Services (AWS), Coursera
- AI For Everyone, deeplearning.ai, Coursera
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization, Coursera
- Neural Networks and Deep Learning, deeplearning.ai, Coursera
- Drug Discovery, University of California - San Diego, Coursera
- Drug Development, University of California - San Diego, Coursera
- Making Biologic Medicine for Patients: The Principles of Biopharm. Manufacturing, MIT, edX
- Command Line Tools for Genomic Data Science, Johns Hopkins University, Coursera
- Python for Genomic Data Science, Johns Hopkins University, Coursera
- Introduction to Genomic Technologies, Johns Hopkins University, Coursera
- Machine Learning With Big Data, University of California - San Diego, Coursera
- Graph Analytics for Big Data, University of California - San Diego, Coursera
- Introduction to Big Data Analytics, University of California - San Diego, Coursera
- Hadoop Platform and Application Framework, University of California - San Diego, Coursera
- Introduction to Big Data, University of California - San Diego, Coursera
- Scalable Machine Learning, University of California - Berkeley, edX (Python/Spark)
- Introduction to Big Data with Apache Spark, University of California - Berkeley, edX (Python/Spark)
- Machine Learning (Octave), Stanford University, Coursera