LUAT (LUKE) NGUYEN

TECHNICAL (IT) SKILLS

- Machine Learning, Predictive Analytics, Data Analysis/Visualization, Product Management
- Programming/Scripting Languages: R, Python, SQL, Perl, C++, RegExp, Pipeline Pilot Scripting
- Relational Database Tools: MySQL, PostgreSQL, Oracle, MS SQL Server, Toad, SQL Developer
- Informatics Tools: Pipeline Pilot, KNIME, TIBCO Spotfire, Databricks, MOE, Schrodinger
- Windows, Mac, Linux, Office 365, MS SharePoint/Teams/Power Automate, Confluence, JIRA

WORK EXPERIENCE

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

- Engaged in cross-functional collaboration to strategically align the product model with key stakeholders and Merck Research Laboratory (MRL)'s global objectives. Managed and contributed to planning, enterprise solution design, (agile) software development, systems integration, and operational strategies.
- Spearheaded the identification of an IT solution for NGS-guided antibody discovery. Successfully implemented a scalable application and helped key stakeholders in Discovery Biologics organization identify more and better hits.
- Successfully led the initial product analysis for the eROP (enhanced Research Operation Plan) AI/ML acceleration project focusing on small-molecules and peptides, aiming to enhance ADME/Toxicity decision-making processes and logistical requests to enable better risk-taking. Additionally, optimized IT processes for accelerated medicine discovery through streamlined workflows with reduced cycles.

October 17 – December 2021
Senior Specialist, Business/Tech Analysis, Discovery Research IT (Merck, South San Francisco, CA)

- Managed and contributed to business-aligned IT strategies, site policies, and best practices.
- Assisted in replicating a machine learning-based retention time prediction model for mAbs using the R programming language.
- Effectively contributed to the procurement of small molecule libraries from Merck's acquired companies, overseeing data migration and registration processes.
- Successfully spearheaded the agile technical development of a cross-functional cloud-based application within four months. This application centralized the requests, procurement, and onboarding of research equipment and instruments, leveraging enterprise applications like Microsoft SharePoint, Microsoft Teams, and Microsoft Power Automate.
- As the sole Merck IT on-site representative, delivered comprehensive IT support for site relocations, infrastructure upgrades, decommissioning tasks, and data management (compute, storage, backup, archive), while implementing security best practices.
- Served as a member of South San Francisco Merck Research Laboratories Extended Leadership Team to drive toward a unified site culture and build enterprise leadership mindset
- Received 25 INSPIRE awards (since joining Merck 'til 2024) in the following categories: Win As One Team, Build a Diverse and Inclusive Culture, Drive Results, Foster Collaboration, Knowing to Learning, Silos to Networks, Withholding to Sharing

March 14 – February 17
Senior Business Analyst, Drug Discovery Systems (Pfizer/Medivation, San Francisco, CA)
- Served as a subject matter expert for Research IT, Informatics, AI/ML related projects
- Provided objective business analysis and recommendations for procedural improvements
- Identified and evaluated opportunities for IT to be a strategic partner to Drug Discovery
- Led and coordinated projects from initiation through deployment
    - Served as BA for an in-house database-driven (agile) development and COTS deployment. Recognized for IT Excellence & Innovation enterprise application development
    - Coordinated the support for the Next Generation Sequencing (NGS) environment
- Managed and contributed to planning, enterprise solution design, software development, systems integration, and operational strategies

May 11 – February 13
Informatics Associate, Project Management (Evotec, South San Francisco, CA)
Led Research IT/informatics application/system supports including data curation and ETL. Collaborated with project managers and developers to develop database queries and deploy Pipeline Pilot informatics workflows and web-based applications. Performed data QC, analysis, and visualization in support of compound management and software development teams to build and manage informatics infrastructure. Curated one million-plus record of data for NIH, NCI, EPA, and biopharmaceutical customers. Part of the teams that helped win contracts valued up to $90 million-plus.

September 03 – June 09
Computational Research Specialist, Modeling & Informatics (VM Discovery, Inc., Fremont, CA)
Contributed to the discovery of small molecule drugs. Supported structure- and property-based drug design for multiple research programs. Provided IT/Informatics application/system builds and supports. Led and managed the Data Analytics Life Cycle including making sure the data is well design, intelligently collected, curated, documented, and building predictive models.
- Patent: US8586619B2 - Agents of Calcium Ion Channel Modulators (program has a potential to become first-in-class); Helped spin-off VM Therapeutics LLC.
- VM Discovery, Inc. Provisional Patent: US60/894,368; Patent helped spin-off VM Pharma LLC and VM Oncology LLC. TrkA program (First-in-Class, Clinical Trial Phase II Ready) was acquired by Purdue Pharma for a total of up to $213 million-plus (September 8, 2015).
- PKC Epsilon program continued to help receive grants from NIH for a total of up to $2 million.

February 02 – February 03
Research Scientist, Membrane Biology (Proteomic Systems, Inc., Sunnyvale, CA)
A start-up (later known as Synamem Corp), planned, executed, and analyzed fluorescence-based assay experiments that helped validate micro-arrayed MembraneChip technology. (See patent US6699719B2)

February 00 - October 01
Research Scientist, Computational Modeling/Chemistry (ArQule, Inc., Menlo Park, CA)
Responsibilities included providing IT informatics supports, structure-function data mining, helping to design, optimize, and develop new methods to build ADMET predictive models. Helped implement new algorithms to study the pseudo-model of CytP450 2C9 enzyme binding affinity into MOE software. Helped modify and integrate a conformational search module into MOE to calculate descriptors of selected conformations of small molecules. Developed scripts to automate complex data analysis. Developed and integrated molecular descriptors to build predictive models.

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