

LENNART LANGOUCHE

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EDUCATION

University of California, San Diego (UCSD)	PhD	Nanoengineering, focus: Biomedical Nanotechnology	2021
Rady School of Management, UCSD	Certification	Mini-MBA	2018
KU Leuven, Chalmers (dual degree)	MS	Nanoscience and Nanotechnology	2013
KU Leuven	BS	Engineering (major: electrical, minor: mechanical)	2011

TECHNICAL SKILLS

Data Analysis (Python, R, MATLAB)	SQL	PCR/dPCR
Cloud Compute (Oracle)	Machine Learning (Scikit-learn, PyTorch)	Microscopy
Experimental Design	Data Visualization (Matplotlib, Tableau)	Image Processing (Fiji)

CAREER EXPERIENCE

[IQVIA](#) | Senior Strategy Consultant, Life Sciences

[AUG 2021 – APR 2023](#)

Managed small teams to solve complex business cases for major pharmaceutical companies and biotech firms.

- Led a team to investigate SKU launch strategies for oral oncolytics and explore implications for stakeholders and product life cycle management using primary and secondary research.
- Managed a team to compile and analyze competitive intelligence data and perform additional secondary research to inform pricing strategy for a major pharmaceutical company.
- Headed a team researching rare disease drug analogues to inform drivers of sales erosion and revenue forecast for blockbuster drug due to loss of exclusivity.

[UCSD @Fraleigh Lab](#) | PhD Researcher in Biomedical Nanotechnology

[SEP 2015 – SEP 2021](#)

Helped develop a custom digital-PCR high-resolution melt platform for infectious disease diagnostics. My contributions:

Project 1: Spearheaded project to find the resolution of the digital PCR-based infectious disease diagnostic platform, using noise modeling and data augmentation, allowing for benchmarking against established technologies.

- Improved data processing pipeline to transform microscopy image stack into loss-of-fluorescence time series data using image analysis and processing tools in ImageJ and Matlab and implemented artifact removal.
- Used Python and R to compare performance of machine learning methods for a multi-class time series classification problem to identify pathogens, using their melt curve 'signature'.

Project 2: Applied a probabilistic machine learning approach for anomaly detection, used for novel genotype detection.

- Used Scikit-Learn to compare five ML methods for the task of anomaly detection on the lab's melt curve data: Logistic Regression, Naïve Bayes, Support Vector Machines, Neural Networks and Random Forest.
- Both Random Forests and SVMs were able to successfully achieve anomaly detection with a sensitivity of 0.94 and a specificity of 0.96, outperforming the other classifiers.

[Illumina](#) | Product Management Intern

[JUN 2018 – DEC 2018](#)

- Formulated market development strategy including voice of customer, competitive and technological analysis, and financial forecasting. Presented findings to upper management, leading to a 15% YoY budget increase to pursue this market opportunity.

[APD Consulting Club @UCSD](#) | Vice-President

[SEP 2016 – AUG 2018](#)

- Organized seven club events, including a case competition and an annual consulting bootcamp.
- Led a team of seven that assessed market entry strategies for a pre-clinical pharmaceutical company.

[Blue LINC @UCSD](#) | Incubatee

[AUG 2017 – APR 2018](#)

- Spent eight weeks shadowing clinicians at three local hospitals to identify unmet healthcare needs.
- Led a four-member team that assessed the business viability of product solutions to pneumothorax as a complication of percutaneous chest biopsy.