

PHU N DANG | dangnphu31@gmail.com

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PROFILE - An eager, adaptive, and thoughtful young professional with a multidisciplinary and entrepreneurial record of leadership and extracurricular activities, fostering a career synergizing technology & real estate. Possesses extensive experience in data-driven technologies, particularly statistics, machine learning, natural language processing, business intelligence, urban digitalization, IoT, data analysis/visualization/ethics. Real estate domains of interest and specialty include CRE pro forma analysis, property management, mixed-use, transit-oriented and joint development, affordable housing, urban design, and green building.

EDUCATION

UNIVERSITY OF CALIFORNIA SAN DIEGO | GPA: 3.738

Exp. Graduation Date: June 2025

Data Science, B.S. | Real Estate & Development, B.S. | Urban Studies & Planning, Minor

SKILLS & ACTIVITIES

- **Tools, Frameworks, and Credentials:** LEED® Green Associate™, CoStar, CEQA, SketchUp, Unreal Engine 5, Cesium, NVIDIA (DeepStream, TensorRT), Python (Pandas, NumPy, Statsmodels, SciPy, RegEx, Matplotlib, Seaborn, Dash/Plotly, Scikit-learn, PyTorch, YOLO), R, SQL, Java, C, Jekyll + HTML/CSS, D3.js + Svelte (ChatGPT-assisted), Tableau, MS Excel / Word, GitHub, VSCode, IntelliJ, Arduino, Thonny, Google Colab, Vietnamese Bilingual Fluency
 - **Extracurricular Activities:**
 - Incoming **Real Estate Development Intern** at Urban Innovations LLC (TOD/joint development)
 - **Property Management Trainee** at DG&CO (learning to manage over 12,000 sq. Ft of real estate)
 - **Developing Leaders Council Member** at NAIOP San Diego (Commercial Real Estate Mentorship)
 - **Etkin Scholar & Partnership Forum Member** at Urban Land Institute, **Student Member** at IREM, APA
 - **Shadow Broker** to Mr. Colin Pancrazi in real estate deals and activities at two commercial real estate firms
 - **Player** and previous **Officer** on UC San Diego Men's Club Water Polo Team (**2022 National Champion**)
 - Active Student Orgs. Involvement: Triton Real Estate Org, USP/Real Estate Student Reps, UCSD Cycling
 - Previous **Research Scholar** at Semiconductor Research Corp. Research Scholars Program (PRISM Center)
 - Previous Data Science Student Society **Workshops Committee Member** (*BI & SWE Domains*)
 - **Honors/Awards:** Emerging Innovator, 2x UCSD PACE Scholarships, ERC Honors Program, Provost Honors, 36th URC
 - **Certifications:** A.CRE accelerator (pursuing), Foundations of Real Estate (ULI), CEQA Practicum (AEP), Business Metrics for Data-Driven Companies (DukeUni), Data Analysis with Python (IBM), MS Office Specialist (Excel)
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EXPERIENCE

QUALCOMM INSTITUTE | Telecom and IT | La Jolla, CA

Jan 2024 – Present

Applied AI & Junior Software Developer (*Cognitive City Twins*)

- Implemented scalable data integration workflows using blueprints and structs in Unreal Engine 5
- Developed data visualization applications using native UE5 objects in Cesium for Unreal, focusing on real estate use cases
- Integrated Google Maps API for a realistic global world as the base for visualization needs in real estate and urban planning
- Utilized Datasmith Exporter plugin to integrate Cesium in Unreal with SketchUp Pro for property modeling
- Built interactive, 3D widgets to display property/urban data, emphasizing user experience and future VR integration
- Developed a framework for building digital twins of buildings in the real world for future placement in the city twins
- Aggregated a large database of the San Diego-Carlsbad region data for future visualization in the cognitive city twins

WORLD DESIGN ORGANIZATION | Design Services Society | San Diego, CA

Jan 2024 – Jun 2024

Housing Solutions Consultant & Designer in Residence (*Science & Technology Network*)

- Advised the ADUGenius project on the latest know-how of ADUs as an innovative housing solution; covering financing structures, building costs, ordinance adoption and setbacks, myths, designs, sustainability, and useful policies/programs
- Served a secretary role in meetings and correspondence with stakeholders and leaders from the United States, Mexico, the UC San Diego Design Lab, and impact project leads to assist San Diego-Tijuana international collaboration projects
- Performed administrative duties for the Science & Tech Network, including event coordination, media design, monthly updates to the World Design Capital committee, event MC/moderator at events with community members & project leads

Affordable Housing Assistant Research Fellow

- Identify and report policy incentives and cost factors relevant to the site context, opportunities, and constraints of affordable housing projects across the United States, focusing on public improvement provisions & tax incentive programs
- Attend meetings and events with industry professionals at the Urban Land Institute to learn practical insights into the current market feasibility of affordable housing projects, with emphasis on LIHTC and ADUs; provided research team with useful empirical information in accordance with the relevant obstacles facing planners and developers
- Received departmental sponsorship to get involved and network with the San Diego Green Building Council to study state-of-the-art green building techniques and ways to integrate green building with affordable housing

Data Science Fellow (*Mentor – Dr. Feiyang Sun*)

Sep 2023 – Jun 2024

- Developed an NLP algorithm to parse property data from CoStar into a tabular format for research purposes
- Applied statistics and machine learning on over 5000 LIHTC projects to derive factors influencing fund allocation
- Utilized analysis methods for social science: feature engineering, clustering, attribute stratification, marginal error analysis
- Identified data sources across the local/city/county levels for analytical purposes, domains include land use, utilities, parking, transit networks, historical districts, balanced community dev. areas (TIF, CDBG, CIP), and public health

BIOKIND ANALYTICS | Healthcare Non-profit | La Jolla, CA

Sep 2022 – Present

President/Director & Lead Data Analyst

- Manage organizational leadership, budget, marketing, outreach, and recruitment activities
- Collaborate with local healthcare non-profits throughout San Diego to discuss potential avenues for data science to improve insights generation/operational efficiency/impact/outreach/client satisfaction/ROI/data systems designs
- Oversee and participate in student data science projects to ensure quality, timely delivery, and meeting clients' expectations; facilitating opportunities for students to apply academic knowledge in impactful, real-world scenarios
- Collaborate with clients to analyze large datasets in identifying key metrics and actionable insights, leading to improved client understanding of programs, initiatives, grants performance; furthered clients' mission as data-driven organizations
- Organize correspondence between members, university faculty, department advisors, and non-profit representatives

NIEMA LAB at UC San Diego | Computer Science & Engineering | La Jolla, CA

Sep 2022 – Oct 2023

Data Science Trainee & Researcher (*Mentor – Dr. Niema Moshiri*)

- Developed an interactive application to visualize Covid-19 time-series data with variant segmentation
- Programmed robust computational algorithms to dynamically smooth data upon input parameters and update graph
- Optimized app by reducing 97% of initial runtime through memoization and efficient data structure implementation
- Benchmarked data compression techniques to optimize serialization efficiency and expedite loading speed
- Wrote 7 research notebooks to uncover patterns in 30+ large-scale datasets involving 3000+ cancer patients
- Exceeded 87% accuracy across diverse evaluation metrics, in accurately predicting breast cancer recurrence status
- Analyzed disparities and data collection gaps to ensure ethical and responsible data science practices

GOING SOLO | Business Intelligence & IT Consulting | Johannesburg, South Africa

Jun 2022 – Aug 2022

Lead Data Analyst Intern

- Implemented a character-based word embeddings model to improve words/phrases cognition for text classification
 - Developed an automated Bayesian text classifier to streamline data labeling processes
 - Analyzed an S&P 500 stock/financials and developed an interactive dashboard in Tableau
 - Enhanced and maintained a PM dashboard, enabling real-time progress tracking/reporting to supervisors
 - Managed projects and led team communications across 7+ time zones for effective collaboration and timely delivery
- ➔ Exceeded internship expectations by proactively implementing an automated data labeling tool with machine learning, effectively saving time and resources, setting new standards for efficiency and problem-solving at the company.

DELOITTE Data Science Mentorship Program | Business Consulting | San Diego, CA

Feb 2022 – May 2022

Data Science Mentee

- Utilized ARIMA models to generate employment metric forecasts and predict market behaviors due to Covid-19
 - Conducted in-depth analysis to extract actionable insights using multiple linear regression, EDA, and visualization
 - Collaborated closely with a mentor from Deloitte, receiving personalized guidance and support on a weekly basis
 - Presented findings to an audience of Deloitte practitioners and advisors from the Halicioğlu Data Science Institute
- ➔ Took on a lead role when the team needed leadership, taking charge of task assignments, scheduling meetings, and cultivating a cohesive data story; created a positive, motivated team environment, on-time delivery, & quality assurance.
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REAL ESTATE PROJECTS

H2 Hillcrest | Personal Project

A design-focused proposal for a state-of-the-art urban infill, mixed-use redevelopment project in Hillcrest, San Diego, to address housing needs, support multimodal transportation, and enhance the local economy with strategic commercial uses. Led by human-centered, climate-resilient placemaking values, with considerations for the lifestyles and culture inherent to Hillcrest.

Urban Economic Determinants of Industrial Location | Personal Project

A discussion paper on the theories of industrial location, with emphasis on environmental regulations, tax incentives, and location factors influencing the decisions to locate (or relocate) by firms. Features case studies of Amazon and the wood furniture industry.

San Jose General Plan Evaluation | Personal Project

A comprehensive evaluation of the Envision San Jose 2040 General Plan, featuring a 1-on-1 interview with Mr. Pierluigi Oliverio, one of 37 Task Force members and a San Jose City Councilmember in District 9, for personal comments on the Envision process.

Public-Private Partnerships in Urban Planning | Personal Project

A research paper on the roles and significance of effective public-private partnerships during the early formation of modern cities (early to mid-industrialization), with case studies from Britain and Italy.

Cities Assessments | Personal Project

A 2-in-1 discussion and analytical paper on the idea of Paris as a Rational City, and Miami as a Transnational City, building off of key points in Paul Knox's "Atlas of Cities".

Ho Chi Minh City – Life by the Sidewalk | Personal Project

A survey paper on the evolution of HCM City's urban landscape over time, with in-depth chronological coverage of significant historical events and periods, lifestyle and cultural preferences, demographics, and varying approaches to urban design.

DATA SCIENCE PROJECTS

D3 San Diego Multifamily Visualizer | Team Project

A D3.js web app to answer the question "Which San Diego submarket for your next multifamily investment?", data queried from CoStar is visualized on a choropleth map of San Diego, highlighting multifamily vacancy rates, built/renovation year, parking/unit

Who's Dominating the Game | Team Project

A D3.js + Svelte web app showing a temporal analysis of console game genres and publishers' prevalence by sales and crit scores

Statistical Inference for U.S. Presidential Elections | Team Project

A detailed analysis of twelve elections for the U.S. presidency between 1976 and 2020 for a deeper understanding of their nature; analyses performed include exploratory, goodness of fit (LRTs), similarity/dissimilarity analysis of distributions, predictive (ML).

OPUBOD - Occupancy Prediction Using Building Operation Data | Personal Project

A time-series machine learning project to discover relevant building operation metrics to predicting occupancy. Examined models include linear regression, auto-regression, and recurrent neural nets, plus statistical analyses for feature selection.

Game Recommender | Personal Project

Performed (1) play prediction using collaborative filtering and (2) hours played prediction using latent-factor models with coordinate descent and gradient descent. All models implemented from scratch with analogous results to the Surprise library.

Solar-Powered Smart Lighting for Sustainable Living | Team Project

Built a solar-powered IoT device capable of collecting live sensor data, adjusting lighting, sending data to a MySQL database using MCU Wi-Fi with synchronous communication. Developed a data processing script to query, transform, and visualize data.

Exploratory and Predictive Analytics for Precision Medicine | Team Project

A data science project for Personalized and Secure Drug Discovery supported by the Semiconductor Research Corp. Scholars Program, mentored by Dr. Niema Moshiri at UC San Diego. The project combines intensive exploratory and predictive analyses to identify patterns and predict breast cancer recurrence using biomarkers, medical, and lifestyle data from over 3,000 patients.

Illuminating Cognizance | Personal Project

A look into major power outages in the U.S. to assess statistical relationships, perform hypothesis testing, data missingness audits, and derive predictive power using ML and feature-engineering, built in pipelines with diverse accuracy metrics and evaluations.

World Happiness Report 2022 | Team Project

Conducted a comprehensive analysis of global happiness patterns using public data from the 2022 World Happiness Report to uncover insights into the factors influencing well-being worldwide.