Visit **pndang.com** for 7 references/recommendations, detailed work experiences, projects, professional activities, hobbies, etc.

PHU N DANG | dangnphu31@gmail.com

+1 (669) 274-8956 | **pndang.com** *(portfolio)* + **/r** for real estate & all in 1 resume | linkedin.com/in/pndang | github.com/pndang

PROFILE - An eager, adaptive, and thoughtful young professional with a multidisciplinary and entrepreneurial record of technical and leadership endeavors, fostering a career synergizing technology with the built world. Known for "skepticism" when handling data, ensuring careful execution and reliable results. Educated in commercial real estate. Possesses extensive practice in data-driven tools, notably statistics, LLMs, NLP, machine/deep learning, business intelligence, digital twins, IoT, data analysis/visualization/ethics.

EDUCATION

UNIVERSITY OF CALIFORNIA SAN DIEGO | GPA: 3.745 **Graduation Date: June 2025**

Bachelor of Science in Data Science | Bachelor of Science in Real Estate & Development | Minor in Urban Studies & Planning

SKILLS & ACTIVITIES

- **Tools** & **Frameworks**:
  - **Adept**: Python (Pandas, NumPy, Statsmodels, Scikit-learn, RegEx, Matplotlib, Seaborn, Dash/Plotly), SQL, Tableau, GitHub, MS Excel/Word/PowerPoint, CoStar, SketchUp, Unreal Engine 5, Cesium, Vietnamese Bilingual Fluency
  - **With project experience**: OOP, R, Java, C, PyTorch, YOLO, Dask, Spark, AWS Route 53, Google Maps API, OpenAI API, SerpApi, LangChain, Hugging Face, Flask, Jekyll, HTML + CSS, MATLAB, D3.js + Svelte, Embedded Systems
- **Extracurricular Activities**:
  - **Lead Software Engineer** at Smart Border Systems | Techstars '23
  - **Developing Leader** Council Member at NAIOP San Diego (commercial real estate mentorship)
  - **Etkin Scholar** & **Shadow Broker** at Urban Land Institute (hands-on with real-world real estate deals)
  - **Player** and prev. **Officer** on UC San Diego Men's Club Water Polo Team *(2022 National Champion)*
  - Previous **Joint Development Intern** at Urban Innovations (FTA-sponsored, joint development)
  - Previous **Housing Solutions Consultant** & **Designer in Residence** at the World Design Organization
- **Certifications**: LLMOps – Building Real-World Apps with LLMs (pursuing – by Comet), Business Metrics for Data-Driven Companies (DukeUni), Data Analysis with Python (IBM), MS Office Specialist (Excel), LEED® Green Associate™ (USGBC)
- **Honors/Awards**: Emerging Innovator, 3x UC San Diego PACE Scholarships, ERC Honors Program, Provost Honors, 36th URC

EXPERIENCE

BIOKIND ANALYTICS at UC San Diego | Healthcare Data Non-profit | La Jolla, CA **Sep 2022 – Present**

President & **Lead Data Scientist**

- Manage organizational communication, leadership, budget, marketing, outreach, public relations, and recruitment
- Work with local healthcare non-profits in San Diego on potential avenues for data science to improve operations; targeting ways to help clients improve efficiency, impact, outreach, client satisfaction, ROI, data systems and use case designs
- Oversee and participate in student data science projects to ensure correct execution, quality, timely delivery, and meeting clients' expectations, facilitating opportunities for students to apply academic training in impactful, real-world scenarios

→ Lead teams in developing data-driven solutions to address clients' operational needs. Leveraging diverse data workflows, including retrospective/exploratory/predictive analyses, large language models, and parallel computing with large datasets. Furthered clients' understanding of patient/donor programs, grants performance, business and investment strategies across over $140 million in combined financial analyses performed. Driven by a commitment to exceptional service quality with insights reflecting clients' operations. Achieving a perfect track record of positive client testimonials & satisfaction.

QUALCOMM INSTITUTE | Telecom and IT | La Jolla, CA **Jan 2024 – Present**

Applied AI & **Jr. Software Developer** *(Spatial Computing - Cognitive City Twins)*

- Implemented scalable data integration workflows using blueprints and structs in Unreal Engine 5
- Developed data viz apps using UE5 objects/instanced static meshes with dynamic spawning, scaling, georeferencing
- Implemented Cesium cartographic polygons, raster overlays, and color blending across material layers for tile coloring
- Built interactive, 3D widgets to display urban data, emphasizing user experience and future VR integration
- Integrated Google Maps API and SketchUp Pro Datasmith Exporter plugin for site plan modeling and city planning
- Tested frameworks to build twins of real buildings for future placement in the city twins based on photogrammetry scans
- Built an edge IoT device with NVIDIA's Jetson Nano, camera, and pre-trained YOLO vision model for AI capabilities

UC SAN DIEGO Urban Studies & **Planning** | Academic Department | La Jolla, CA **Sep 2023 – Jun 2024**

Affordable Housing Research Assistant & **Data Science Fellow** *(Mentor – Dr. Feiyang Sun)*

- Reported affordable housing policy incentives and cost factors, emphasizing public improvements and tax incentives
- Networked with developers to study market feasibility, provided research team with empirical information on the barriers, opportunities facing multifamily projects, pertinent to timing, permitting, site contexts, parking, and construction costs.
- Programmed a bespoke algorithm to parse property data from CoStar into a tabular format for non-commercial purposes

- Applied statistics and machine learning on over 5000 LIHTC projects to derive factors influencing fund allocation
- Used analysis methods for social science: feature engineering, clustering, attribute stratification, marginal error analysis

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 a bespoke data-smoothing algorithm that selectively reads data upon user requests to optimize runtime
- Reduced initial runtime by 97% (5s to sub-0.1s) with caching/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 predicting breast cancer recurrence status
- Analyzed disparities and data collection gaps to ensure ethical and responsible data science practices
- Nominated & gave a conference presentation, special commendation by the Semiconductor Research Corporation

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 company's 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 Halıcıoğlu 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.

PROJECTS

Cognitive City Twins Portfolio (pndang.com/projects) | Team & Personal Project
Built digital twins for UCSD, Chula Vista, and Hollywood's Vinyl District with Cesium for Unreal. Focused on commercial real estate, property modeling, & urban design applications. Demonstrated how IoT technology and AI can transform the built world.

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.

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
Analyzed global happiness using data from the 2022 World Happiness Report to study factors influencing well-being worldwide.