Chatdanai Lumdee, PhD

-- A lifelong learner. Physicist turned data scientist. Building his mastery towards data-driven society.

E-mail: chatdanai.L@gmail.com
Phone: (+66) 089-642-4266
Website: clumdee.github.io

PROFILE

Chatdanai is a data analyst with experience in big data analytics, machine learning, experimental design, and numerical simulation across several working fields from scientific research, banking, digital consulting, to fraud analytics. He has been working exclusively in roles that utilize coding, data handling, machine learning, and big data technology in the past 2 years.

He has delivered several analytics projects, ranging from data aggregation to machine learning prediction to dashboards, to support business plans and decisions, such as customer segmentation, marketing plans, and profit and loss optimization.

Chatdanai also writes blogs on his website where he shares codes from personal projects in data science and other experiences.

TECHNICAL STACKS

Data Analytics: Python (Numpy, Pandas, Matplotlib, Seaborn, Plotly, scikit-learn, etc.),
PySpark, SQL, Matlab, Excel, PowerBI, Tableau, Microsoft Azure,
and Azure Databricks

Others: **Microsoft Office**, LabVIEW for hardware control system,
various tools for nanoscale fabrication, measurement, and simulation

PROFESSIONAL & TECHNICAL EXPERIENCE (Data science and analytics)

Senior Data Analyst   08/2019 –
present
Fraud Analytics, Agoda – Bangkok, Thailand

Job description: Apply quantitative analysis, data mining, and the presentation of data to understand fraud and how it relates to Agoda's customers/products, and work across teams to drive influence and minimize the impact of fraud.

● [To be added]

  Responsibilities and Achievements:

  ○ [To be added]

Data Scientist (Digital Consultant)   09/2018 – 08/2019
Applied Intelligence, Accenture Digital, Accenture – Bangkok, Thailand

Job description: Apply big data and analytics expertise to help businesses, organizations, and governments redefine how they serve connected customers and operate their connected enterprises.

- <u>AI supported Call Center</u> [Business Dev], (nondisclosure)   06/2019 - 08/2019

  Responsibilities and Achievements:

  - Supported call intents prioritization by analyzing historical call log to summarize agents' workload by call category
  - Developed dashboards to visualize agents' workload and facilitate data slicing across different dimensions
  - Supported business and solution planning that answer client's needs

- <u>Personalized Wealth Management</u> [Business Dev], (nondisclosure)   06/2019 - 08/2019

  Responsibilities and Achievements:

  - Supported building business cases based on data-driven customer segments emphasizing personalized targeting and offering financial tools most suitable to individuals
  - Supported business planning by exploring current infrastructure and provide feasible solutions to bring the plan to live

- <u>Digital Lending Project</u>, Leading Commercial Bank in Thailand   09/2018 - 05/2019

  Responsibilities and Achievements:

  - Supported and automated lead selection, data processing, lead delivery using <u>PySpark</u> on <u>Microsoft Azure Databricks</u> – the project has acquired >100M THB of loan disbursement in 4 months and is continuously learning from previous MVP(s)
  - Developed an approach to identify personal interests by crossing internal data with <u>web-scraped</u> events data – created a proxy of personal interest by correlating a customer's present at an event's venue
  - Developed a customer segmentation dashboard using <u>PowerBI</u> – transformed multi-dimensional data into easy to understand customer profiles and led to crafting of personalized messages for different segments
  - Modeling a data structure (<u>Python, PySpark</u>) and developing a dashboard (<u>PowerBI</u>) to support business planning and cost optimization using campaign's feedback – target to be available to business users for lead selection in future campaigns

Data Scientist   11/2017 – 08/2018
KLabs, Kasikorn Business-Technology Group (KBTG) – Bangkok, Thailand

Job description: Apply data science and machine learning techniques with customer data to develop personalized financial services -- for example <u>KADE (K PLUS AI-Driven Experience)</u>.

- <u>Investment Recommendation Project</u>

Responsibilities and Achievements:

- Designed, maintained, and executed data extraction process using <u>SQL</u> to feed into machine learning pipeline – reducing the amount of repetitive work performed across the team
- Built <u>machine learning models</u> (<u>Python</u>) targeting personal investors based on their investment profile – helping the bank to offer the right products to customers at anywhere and anytime
- Packaged <u>model pipeline</u> for deployment – the module is one of the key features implemented as part of transformation to digital banking

PROFESSIONAL & TECHNICAL EXPERIENCE (Scientific Research)

*check these links for [publications](#) and [presentations](#)

Postdoctoral Research Scientist   04/2016 – 10/2017
Department of Physics, University of Gothenburg/Chalmers – Gothenburg, Sweden

Research focus: <u>Next Generation Data Storage Technology</u> (magnetoplasmonics, nanomagnetism)

Research description: We are exploring the interplay between nanoscale optics and magnetism with the aim to develop a technological platform for the next generation of data storage units (a European Union's project in EU Horizon2020 program).

Responsibilities and Achievements:

- Developed a protocol to fabricate metallic nanostructure arrays with encapsulated magnetic materials – allowing optical interaction at the nanoscale without degrading magnetic properties
- Developed a protocol for rapid transfer of nanostructures to arbitrary substrates – opening new possibilities of overlaying nanostructures on samples with unusual surface topology and biological samples
- Designed and set up hardware control system using LabVIEW to automate measurement and data collection process – enabling continuous data collection without human intervention
- Performed numerical 3D electromagnetic simulation to discover underlying sources of experimental data

Graduate Research Scientist   08/2010 – 01/2016
CREOL/The College of Optics and Photonics – Orlando, Florida, USA

Research focus: <u>Optical Interactions at the Nanoscale</u> (nanophotonics, surface plasmon resonances, gap-plasmons)

Research description: I spent my time studying how nanoscale objects and light interact. This research area is the core foundation of several emerging technologies including single-molecular sensing, surface enhanced photocatalysis, and heat-assisted magnetic recording.

Responsibilities and Achievements:

- Developed new approaches to interactively control optical interaction between nanoparticles and metallic substrates

- Designed and set up experiments to capture optical responses of single nanoparticles using microscopy and spectroscopy techniques
- Performed numerical 3D electromagnetic simulation to discover underlying sources of experimental data
- Uncovered how nanoscale surface roughness affects optical interactions
- Uncovered the effect of enhanced photoluminescence in metallic nanoparticles as a result of optical interaction at the nanoscale

EDUCATION

Ph.D. in **Optics and Photonics**   08/2010 – 12/2015
CREOL/The College of Optics and Photonics, University of Central Florida – Orlando, Florida, USA
GPA: 3.95/4.00

B.Eng. in **Nano-engineering** *(major in Nanoelectronics)*   08/2006 – 05/2010
Chulalongkorn University – Bangkok, Thailand
GPA: 3.91/4.00, Graduated with First Class Honors

Please find my website for additional information