

RAYMOND CHANG

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EDUCATION	University of California, Los Angeles MS in Physics Ph.D Candidate in Physics <ul style="list-style-type: none">Interrupted from April 2021 to August 2023 due to the mandatory Korean military service. Northwestern University Bachelor of Science in Physics and Astronomy	<i>Sep 2016 - Present</i> Los Angeles, CA <i>June 2016</i> Evanston, IL
WORK EXPERIENCE	Data Scientist , Peoplefund Company Incorporated Data Strategy Team <ul style="list-style-type: none">Optimized the loan approval strategy model, cutting runtime from 3 days to 10 minutes, elevating the product into a viable solution for enterprise-level lenders.Designed and implemented a new loan performance prediction model, reducing MAPE from 41% to 6%.Defined the comprehensive objective function and completed code architecture for a loan profit optimization model. Its backtesting results conservatively estimate a 5-18% increase in revenue.Led collaboration with engineering and business teams to incorporate modern data science tools, such as Superset, MLFlow, and others, streamlining operations and standardizing documentation.Deployed proof-of-concept products, supplying full-stack codes to support engineering teams in further development. Data Scientist , Voithru Corporation Data Team <ul style="list-style-type: none">Launched and managed the company's first-ever fraud detection system based on freelancer behavior logs on the company platform, detecting 1000+ fraudulent translations (5-10% of total) per month.Developed a novel ranking system to oversee 1,700+ freelancers, integrating 12+ performance metrics derived from feedback by product and quality management teams.Deployed the first deep learning subtitle categorization model with an approximately 90% accuracy rate to provide insights for the quality management team and the fraud detection system.Built and maintained Apache Superset dashboards to visualize freelancer performances and statistics.Proposed a machine-translation-assisted translation experiment design to improve productivity by over 20%, and kickstarted the platform development.Implemented a bioinformatics algorithm to automate audio-subtitle matching. Improved the in-house system's time efficiency by three orders of magnitude while drastically improving the accuracy.	<i>Sep 2022 - Jul 2023</i> Seoul, South Korea <i>Nov 2021 - Sep 2022</i> Seoul, South Korea
RESEARCH EXPERIENCE	Graduate Research Assistant , University of California, Los Angeles Miniscope Project, Neuroscience Discovery Group <ul style="list-style-type: none">Constructed a data analysis pipeline that streamlines the process of extracting the behavior modulated neuronal activities from raw data, which became the internal standard analysis package for the laboratory.Developed a wireless brain imaging device that can be implanted on live, unrestrained animals. Over-saw the circuit design, microcontroller codes, and data and power streaming protocols, leading to the introduction or improvement of 7+ features while maintaining the same power consumption.The wireless design received a 1.4 million dollar grant from the National Institute of Health for its large-scale piloting experiment and is currently deployed in various UC labs. Electrophysiology Signal Clustering Project, Center for Biological Physics <ul style="list-style-type: none">Developed an algorithm for tetrode signal clustering based on the application of Monte Carlo method on a 4-D quantum Ising model.Improved the accuracy of detecting which brain cells the electric signals have originated from.	<i>Jan 2019 - Apr 2021</i> <i>Dec 2016 - Jun 2017</i>
TECHNICAL SKILLS	Programming Languages, Frameworks, and Softwares <ul style="list-style-type: none">Languages: Linux, Python, SQL, C, MatlabFrameworks: Apache Spark, Docker, Kubeflow, MLFlow, Jenkins, DBTSoftwares: EC2, Apache Superset, Fusion 360, KiCad	
LEADERSHIP EXPERIENCE	Teaching Assistant , University of California, Los Angeles Physics and Astronomy Department <ul style="list-style-type: none">Worked as an instructor for discussion sections and laboratory sections for 100-200 students per quarter.Conducted weekly teaching sessions and reviews; designed and graded quizzes, tests, and exams.Achieved 8.77 to 9.56 evaluation scores on a scale of 0-10.	<i>Jul 2017 - Jun 2019</i>