DIEU (OSCAR) TO

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EDUCATION

Grinnell College, Grinnell, Iowa 8/2024 – 05/2028 (expected)

Bachelor of Arts in Mathematics with a Concentration in Statistics

- **GPA**: 3.88/4.0
- **Relevant coursework:** Applied Statistics, Intro to Data Science, Linear Algebra, Imperative Problem Solving, Object Oriented Programing and Data Structures & Algorithms.
- **Financial Award:** International Grant (100% Tuition Free)

The Governor's Academy, Byfield, Massachusetts 08/2019 – 05/2023

- **GPA**: 4.52/4
- **SAT:** 1530/1600

RESEARCH INTERESTS

- Data Analytics
- Operational Decision-Making
- AI-assisted analytics
- Decision Intelligence

SELECTED AWARDS & HONORS

Grinnell College Student Awards

Dean's List Award (x3 semesters) 2024 – 2026

International Grant (100% Tuition Free)

The Governor's Academy Student Awards

National Merit Scholarship Finalist 2021

AP Scholar with Distinction 2022 – 2023

High Honors 2020 – 2022

PROFESSIONAL EXPERIENCE

STEW MAKERSPACE

Tech Lead 10/2025 – Present

- Trained and assisted patrons in tool operation, design software, ensuring safety and project quality
- Instruct a team of two Makerspace Monitors to conduct equipment maintenance, troubleshooting, and calibration to sustain equipment operational reliability and adherence to safety standards.
- Collaborated with other Studio Leads regarding workshop organization and space management, improving patron efficiency and experience
- Supervised patrons' Makerspace operations, enforcing safety protocols and providing technical guidance on woodshop, metalworking, and digital fabrication equipment (CNC, laser cutter, 3D printers)

ACADEMIC EXPERIENCE

EMULATED TARGET TRIALS FOR ALCOHOL WITHDRAWAL TREATMENT

Undergraduate Research Assistant — Kaiser Permanente Washington Health Research Institute / Dr. Pamela Shaw

5/2026 – Present

- Conduct literature review on emulated target trials, causal inference, inverse probability of treatment weighting, propensity score methods, and clone-censor-weight designs for observational health data
- Support research on an emulated target trial comparing phenobarbital and benzodiazepines for Alcohol Withdrawal Syndrome using electronic health record data
- Develop simulation studies in R to evaluate bias, variance, standard error estimation, confidence interval coverage, RMSE, and robustness across regression adjustment and IPTW-based estimators
- Implement and compare multiple analytic strategies, including correct covariate adjustment, misspecified adjustment, unstabilized IPTW, stabilized IPTW, and misspecified IPTW

- Analyze practical challenges in real-world evidence generation, including treatment timing, confounding by indication, positivity violations, extreme weights, and model misspecification
- Summarize statistical methods literature and translate methodological findings into concrete design considerations for EHR-based treatment-effect estimation

LOCAL PROPERTY TAX REVENUE AND STUDENT OUTCOMES
Economics Capstone Project (R, Applied Econometrics, Public Economics) 9/2025-12/2025

- Designed a district-level case study that analyzed the relationship between local property-tax–based school financing and academic outcomes for ~400 Massachusetts public school districts between 2015–2023
- Collected, cleaned, and merged administrative datasets from the Massachusetts DESE, including per-pupil expenditures, MCAS performance, and student socioeconomic metrics
- Conducted statistical modelling and analysis in RStudio, producing LOESS smoothers and linear regression models to evaluate nonlinearities and diminishing returns to educational spending
- Interpreted linear models linking district-average MCAS ELA scores to per-pupil spending and percentage of high-needs students
- Analysed empirical results using public-economics theory and literature (Coleman Report; Hanushek)

STATISTICAL ANALYSIS OF MLB PITCHING PERFORMANCE BY HANDEDNESS
Independent Research Project 9/2025 – 12/2025

- Designed a statistical study using 2024 MLB Statcast data (n = 121 pitchers; >1,750 pitches each) to evaluate whether pitcher handedness affects performance
- Collected, cleaned, and analyzed real-world sports data from online sources using R, including merging two separate datasets and filtering out non-usable data.
- Conducted exploratory data analysis with side-by-side boxplots and descriptive statistics to assess distributional differences between left- and right-handed pitchers
- Applied inferential methods including t-tests, z-tests for proportions, and confidence-based hypothesis testing
- Built and interpreted nested linear regression models to isolate the effect of handedness while controlling for external variables
- Used ANOVA (F-tests) to compare nested models and quantify explanatory power of additional predictors
- Produced a structured, reproducible statistical report with clearly articulated methods, results, and limitations

SKILLS

Languages: Full English Proficiency (8.5 IELTS), Vietnamese (Native)
Programming: Proficiency in C, Java, R, Python

R CODING LANGUAGE FOR STATISTICS AND DATA SCIENCE

- Applied R for data cleaning and merging multi-source datasets
- Conducted exploratory data analysis visualizations using ggplot2, including scatterplots, LOESS smoothers, regression lines, and diagnostic visuals
- Implemented linear models, ANOVA, chi-squared tests, and logistic regression; assessed assumptions and model fit using residual analysis
- Produced reproducible analyses in R Markdown, integrating code, figures, and written interpretation for academic reports

FOUNDATIONAL MICROSOFT C# CERTIFICATIONS

- Junior proficiency in C#
- Experienced in variables, data types, control structures, and object-oriented programming principles.

IBM FULL STACK SOFTWARE DEVELOPER PROFESSIONAL CERTIFICATIONS

- Junior proficiency in HTML, CSS, & JavaScript.
- Familiar with principles of Software Engineering and modern Cloud Computing.
- Adept at using version control systems such as Git and GitHub.
- Familiar with development process of Front-End Apps using React framework, and Back-End Apps with Node.js and Express
- Familiar in utilizing Python for Data Science, AI & Development
- Familiar with developing AI Applications with Python and Flask
- Familiar with the Django Application Development cycle using SQL and Databases
- Junior proficiency with application development utilizing Containers (Docker, Kubernetes & OpenShift)
- Experienced with Application Development using Microservices and Serverless architecture