

David Tang

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EDUCATION

Purdue University

West Lafayette, IN

Bachelor of Science Computer Science Honors

May 2026

Honors: 4x Dean's List, 4x Semester Honors, National Merit Finalist

GPA: 3.96

Relevant Coursework: Computer Architecture, Data Mining and Machine Learning, Data Structures and Algorithms, Discrete Math, Java, Linear Algebra, Multivariate Calculus, Probability, Real Analysis, Systems Programming

LANGUAGES AND TECHNOLOGIES

Languages: Python, C, Java, CSS, Javascript, Dart, HTML

Technologies: APIs, React, Git, NodeJS, Bootstrap, Flask, Sklearn, Pandas, Numpy, TensorFlow, SQL Alchemy

EXPERIENCE

CME Group

Chicago, IL

Software Engineering Intern

May 2024-August 2024

- Revised company's legacy Java code to shift the trade-matching backup engine's state source from the on-premise database to the primary engine to improve latency and fault tolerance in the cloud environment.
- Leveraged Bamboo CI and Jenkins to integrate state copying and validation changes into the backup match engine's startup routine, resulting in fewer database reads and faster startup.

The Data Mine, Purdue University

West Lafayette, IN

Merck Corporation Collaboration

August 2023-December 2023

- Collaborated with a cross-functional team to use natural language processing to generate vector representations for various protein amino-acid sequences which were analyzed using machine learning techniques such as principal component analysis, neural networks, and KNN.
- Utilized different natural language processing frameworks to assess protein stability, an important trait for biopharmaceutical development.

PROJECTS

PDF Editor (<https://github.com/dtang123/PDFeditor-Frontend/>)

- Developed a cloud-based app using React that allows users to upload, store, edit, delete, and share PDF documents.
- Designed a NodeJS backend that allows the app to store and retrieve information from MongoDB Atlas database and links the app to Firebase Authentication to allow for user sign-in.
- Implemented web sockets into the application to allow multiple users to simultaneously edit a document.

Java Marketplace

- Collaborated with 4 students through git to construct a Java Swing GUI app that models an e-commerce platform where buyers and sellers can connect and conduct transactions.
- Executed object-oriented programming principles to simulate the marketplace and employed sockets, threading, and synchronization to allow multiple clients to interact with the website concurrently.
- Facilitated weekly meetings and coordinated tasks and deadlines with group members to ensure the project progressed efficiently.

E-Commerce Site (<https://charming-dolphin-cc1e3f.netlify.app/>)

- Created an e-commerce site using React, React-Redux, Stripe, and Firebase that allows users to browse through and "purchase" various products.
- Leveraged Firebase authentication to allow users to sign in with email and Google sign in.

EXTRACURRICULARS

RoboMasters Robotics Club

August 2022-May 2023

- Cooperated with peers to build a working battle robot with a turret and achieved 5th place in RoboMaster Robotics competition.
- Augmented 1700 images of robot's armor plate to train object detection model to 97% precision.