RAY CAO

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EDUCATION

University of Michigan – Ann Arbor, College of Engineering　　　　　　　　　　　*Ann Arbor, MI*

B.S.E in Computer Science (CSE)　　　　　　　　　　September 2017 – April 2019 (Expected)

Coursework: Data Structures and Algorithms, Web Databases and Information Systems, Database Management Systems, Machine Learning, Operation System, Computer Security, Mobile Apps Development

GPA: 3.88/4.0 *(University Honors & Dean's List)*

University of Michigan – Shanghai Jiao Tong University Joint Institute　　　　　　*Shanghai, China*

B.S.E in Electrical and Computer Engineering (ECE)　　　　September 2015 – August 2019 (Expected)

Coursework: Programming & Elem. Data Structures, Logic Design, Signals and Systems, Technical Communication

GPA: 3.50/4.0 *(Excellent Student)*

WORK EXPERIENCE

Summer Developer Intern　　　　　　　　　　　　　　　　　　　　*May 2018 – August 2018*

Information Technology Service (ITS) – University of Michigan.

• Developed the JSON message triggers of content changes in of .NET databases as the notification API for consumers

• Conducted Cucumber automation tests in interface and back-end in collaboration with business systems analysts

• Built the Django MVC prototype of student data privacy management dashboard (MiData Beta) with UX designers

Co-president and Marketing Director　　　　　　　　　　　　　　　　　　*March 2018 - Present*

Michigan China Forum – University of Michigan.

• Directed the planning and execution of forum events (meetings and fundraisers) of 1100+ attendees in Ann Arbor

• Maintained relationships with corporations, school departments and local organizations and expanded media exposure

PROJECT EXPERIENCE

Google Summer of Code (GSoC) 2018　　　　　　　　　　　　　　　*March 2018 – August 2018*

OpenHealth Library – Stony Brook University Biomedical Informatics.

• Created a *JavaScript* search and retrieval library for the API of Genomic Data Commons by National Cancer Institute

• Validated deployment in different environments for the use as a serverless resource and launched *v0.1* version on *npm*

• Configured *GraphQL* modules and documented the workflow from query, file download to bioinformal data analytics

Dynamic Pricing and Traffic-Based Model for Ride-Sharing　　　　　　　　　*June 2018 - Present*

Summer Research, Department of Industrial & Operations Engineering, University of Michigan.

• Modeled the congestion correlated to ride-sharing services in Manhattan using flow theory and hexagon demand map

• Visualized the supply-side traffic and documented the progress for publication with *d3* library, *geojson* and *geoPandas*

Statistics Online Computational Resource (SOCR) Toolbox Research Team　　　*January 2018 - Present*

Multidisciplinary Design Program – Faculty Research Project, University of Michigan.

• Established the risk prediction model for type 2 Diabetes and related outcomes for Dr. Sukaew's postdoctoral research

• Contributed to the optimized data cleaning process for huge amount of data of 5-year healthcare records in Thailand

EcoWorks Educational Mobile App Development　　　　　　　　　　　　*April 2017 - Present*

Discovery Team, BLUELab, University of Michigan.

• Designed and implemented the mobile educational and habit-forming tool for Detroit NGO EcoWorks for Android

• Built video streaming platform for the "energy smart" lessons with the *Node.js* back-end and *React Native* front-end

SKILLS

Languages: C++/C, Python, JavaScript (Vanilla, Node.js, React), SQL, MATLAB, HTML&CSS, C# (.NET)

Tools: Git, Cucumber, Hadoop, AWS, Travis, LaTeX, Microsoft Office, Adobe Creative Cloud