



Ying Wu College of Computing

Corporate Partnerships

About Ying Wu College of Computing

NJIT established the Ying Wu College of Computing (YWCC) in 2001, reflecting its desire to make computing a centerpiece of its vision for the 21st century. The only college of its kind in New Jersey, YWCC builds on two decades of dedicated computing education and research. Its mission is to teach a broad range of computing disciplines to students on campus and at a distance, to carry out cutting-edge computing research and to work closely with industry. YWCC supports faculty and student innovation and collaborates closely with the local tech industry, aiming for a broad impact inside and outside the campus.

About Corporate Partnerships

YWCC works closely with corporate partners to train a skilled workforce, to transform ideas into impact and to solve real and pressing problems with software technologies.

Working with YWCC enables you to:

- Enhance your team's skill set with customized tech training and stay on the cutting edge.
- Collaborate with our world-class faculty and students to solve company-specific research problems by targeted use of advanced software technologies.
- Access cost-effective software development talent through experienced software engineers working on managed development projects while pursuing their studies.



Sponsored Research

- Partner with YWCC researchers to pursue a well-defined research project specific to your company needs. A master services agreement, outlining the business relationship, intellectual property agreements and other legal matters is created. Subsequent statements of work include deliverables, timelines and costs.
- Research faculty and students with relevant expertise are identified and form a team to work with designated company personnel. The team works closely with these individuals to study the problem, propose innovative solutions and implement a working software prototype over the course of one or two semesters.

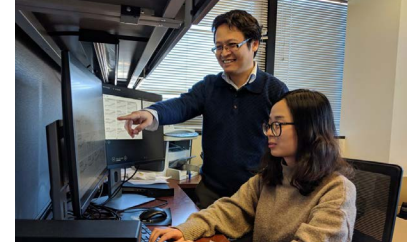
Examples

UPS sponsored a data science research project aiming to improve predictions of package delivery time. Results of the project have led to the productization of a variant of the algorithm in UPS systems.

JD.com, China's largest retailer, sponsors a series of blockchain technology projects with NJIT/YWCC and the Institute of Software at the Chinese Academy of Sciences (ISCAS). The projects focus on solving efficiency and stability challenges within blockchain and explore new applications of the technology.

RiskVal Financial Solutions sponsored a data science research project to use cutting-edge techniques to model fluctuations in the bond market. The model was perfected based on data provided by RiskVal and improved the models in use by the company.

Vertex, an industry leader in tax technology, sponsored multiple research projects to apply advanced machine learning technology to classify products into categories for tax calculations. Image analysis algorithms as well as natural language processing were used in the solution for product identification and classification, resulting in a significant increase in accuracy and processing speed.



Customized Corporate Training

- Advance your employees' career development goals and meet your business needs by providing your workforce access to customized state-of-the-art computing education and training programs.
- We work individually with each partner to design and develop courses that cater to their specific requirements. Training covers the gamut of the computer science curriculum, from introductory courses in programming to modern complex AI techniques.
- Courses are delivered by YWCC professors with PhD students, who serve as teaching assistants. These can include bootcamp-style hands-on classes using state-of-the-art software packages and cloud resources.
- Courses are offered through flexible instructional delivery formats: on-campus, online and on-site at partner locations.

Examples

UPS employees were trained in a three-pronged on-site course, with separate tracks for data science, data engineering and data analysis. Faculty also provided detailed feedback on the students, which was used by UPS to perfect the fit of the employees to their future assignments. The course outcomes were one of the key factors in channeling qualified employees to more challenging technical jobs at UPS without undergoing a competitive recruiting process, saving both time and money.

Hearst employees participated in an on-site training in the fast-growing area of data visualization. Designed specifically for Hearst, the courses help employees glean insights from Hearst's proprietary information to develop a deeper connection with its audience and customers. Topics included fundamentals of data analytics and data visualization.

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Software Development

- Partner with NJIT/YWCC to develop, test and demonstrate new software designs and prototypes. A master services agreement, outlining the business relationship, intellectual property agreements and other legal matters is created. Subsequent statements of work include deliverables, timelines and costs.
- Avoid costly outsourced software development. Take advantage of MS students having significant industry experience to provide cost-effective software development and engineering solutions.
- Project management may be done by the company or by YWCC.

Examples

NJTPA (North Jersey Transportation Planning Authority) has sponsored multiple software development projects at YWCC. Projects have included recommender systems using learning and topic models, the use of virtual/augmented reality to demonstrate distracted driving behaviors, and the creation of a sidewalk inventory for Essex county using image analysis and AI.

NJII (New Jersey Innovation Institute) outsourced to NJIT/YWCC a virtual reality project to train nursing professionals. The project was the continuation of a previously outsourced effort involving the Unity game development environment.