



Explore



AskOski (<https://askoski.berkeley.edu>) draws together information distributed throughout the University into a central platform allowing students to illuminate their academic terrain like never before. The system incorporates degree audit, course description, and historic enrollment information combined with machine learning to help students explore their interests, connecting course concepts across departments, while satisfying complex constraints of their programs.

Big Data



The project is an effort started in the summer of 2016, supported by NSF EAGER awards (#1547055 and 1446641), developed in close collaboration with the Office of the Registrar, IS&T, and the Office of Planning and Analysis. It has made higher education a first-class beneficiary of the latest techniques in AI and natural language processing and catalyzed conversations on the role of big data and learning analytics on campus. The system is in continual development, grappling with aiding students in achieving their personal goals while retaining the values and pedagogical objectives of the institution.

Research



In addition to forwarding the educational mission of the University, the project has also contributed to its research mission. A recent paper [1] details the machine learning behind the system, its development and deployment, and a user study that informed its design. The platform scored high in user intent to use (4.25/5) and underscored the variety of resources, internal and external, students are consulting to address their many enrollment considerations. Ongoing data science and usability research with direct implications for practice will insure that the platform continues to evolve.

[1] Pardos, Z.A., Fan, Z., Jiang, W. (2018) Connectionist Recommendation in the Wild. CoRR preprint, abs/1803.0953. <https://arxiv.org/abs/1803.09535>

Project lead:

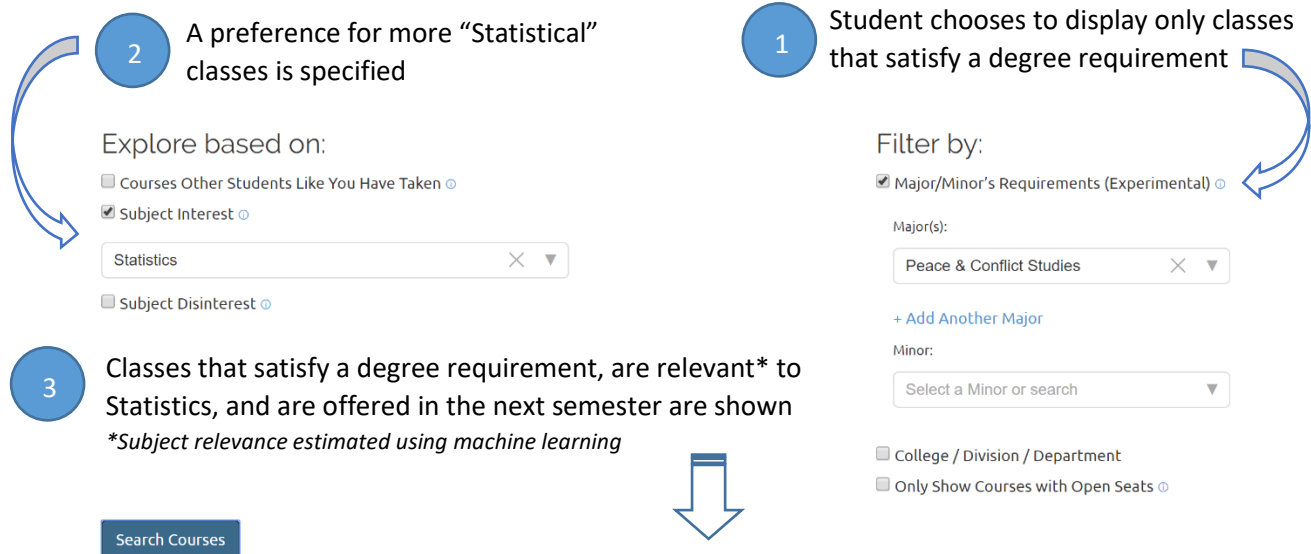
Zachary Pardos <pardos@berkeley.edu>
Assistant Professor
University of California at Berkeley
Graduate School of Education (50%)
School of Information (50%)

Project Team:

Christopher Le (EECS Undergraduate)
Zihao Fan (iSchool Master's)
Arshad Ali (EECS Undergraduate)
Alessandra Silveira (GSE Master's)
Andrew Nam (ECON/EECS undergraduate)
Mark Chiang (IST - Data Warehouse)
Max Michel (IST - Data Warehouse)
Aswan Movva (IST - Data Warehouse)
Anji Gannavarapu (IST - Data Warehouse)
Daniel Grieb (IST - Data Warehouse)
Andrew Eppig (Office of Planning and Analysis)
Raul Infante (Office of the Registrar)
Johanna Metzgar (Office of the Registrar)
Walter Wong (Office of the Registrar)

Mobility: A primary objective going forward is to improve upward mobility by using this technology to make it easier for students to identify their intended major(s) and select courses that will articulate. Our AI approaches will be used to automate the identification of viable pathways to transfer and candidate courses that could expand articulations between institutions. We will be pursuing pilots of these ideas with our multi-site partners, Laney College and UC Irvine.

Example Use Case



Considerations for Fall 18:

CCN	Course Name	Course Subject
23956	Concepts of Statistics (135)	Statistics
31516	Applied Econometrics and Public Policy (C142)	Economics
31516	Applied Econometrics and Public Policy (C142)	Public Policy
21063	Economic Statistics and Econometrics (140)	Economics
25139	Introduction to Development (C32)	Geography
21166	Introduction to Population Analysis (110)	Demography
31516	Applied Econometrics and Public Policy (C131A)	Political Science
28928	Introduction to Probability and Statistics in Biology and Public Health (142)	Public Health