

### Abstract

Education environments are becoming increasingly complex with the advent of new applications and technologies meant to organize curricular resources, simplify learning activities and resource delivery, and manage student and curricular performance. Each system is an important piece of a larger picture of success for the institution down to the individual student, but frequently marrying data from geographically and structurally disparate applications is near impossible or requires significant and costly manual efforts.

In this paper we will identify how Artificial Intelligence can support linked, systems-based content delivery that is customized to the demands and needs of students, faculty, and administrators. Advanced artificial intelligence that acts like a personal librarian or archivist for the large quantity of content created by faculty and stored/delivered in commercial Learning Management Systems becomes immediately accessible and actionable for students, faculty and administrators. isseek.ai's thoughtfully designed features enable users to discover, interact, and take actionable insights from curricular and performance data like never before. More than 50,000 UGME students and countless faculty have engaged with this automated system shifting the medical education paradigm.

### Challenge

The rise and rapid changes in education technology have increased the effectiveness of teaching and provided interesting tools for learners dedicated to specific outcomes. As such, education institutions amass technologies that serve their individual purpose well, but do not contribute to expressing a more-holistic illustration of educational efforts and their effectiveness on student competency-based performance. In order to derive insights that paint a comprehensive picture, seamless integration, and transformation, normalization and optimization of data needs to occur. Often times these initiatives are monumental, requiring expertise that may not be found in a traditional Educational Technology team, as well as significant investments in time and money. These costs hinder speed and action that can be derived from timely data insights.

### Objective

Identify how Artificial Intelligence and Machine Learning can be leveraged to unify geographically and structurally disparate data to:

- Customize and facilitate discovery and delivery of instructional resources
- Present a holistic view of curriculum and presentation of topics and materials across academic years, course, and discipline
- Understand and automatically align information to objectives-based outcomes and other ontologies
- Paint a clear picture of student performance on objective-based outcomes and provide a roadmap for individual student improvement and program improvement

### Approach

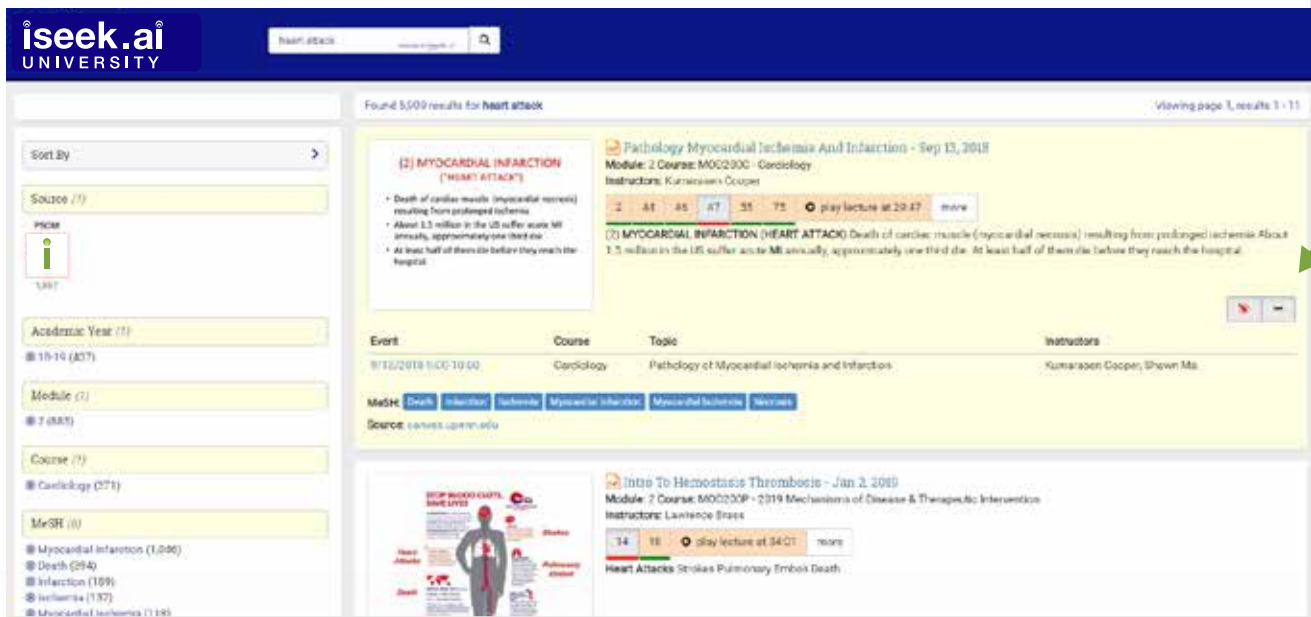
- Review and understand resources – recognize potential commonalities and overlaps in information
- Apply isseek.ai patented processes, proprietary algorithms, and Machine Learning to pull discrete entities out of data sources
- Transform discrete data elements and unify disparate data sources
- Apply isseek.ai patented processes, proprietary algorithms, and Machine Learning with attention paid to discipline-specific ontologies and knowledgebases
- Create a cohesive dataset or datasets
- Overlay User Interface improvements

Results

Curriculum Intelligent Agent™

Designed to bring the user the right resources at the right moment, Curriculum Intelligent Agent focuses students on exact content required for subject mastery, and enables quick recall of the landscape of topic coverage across courses, resource types, etc. All information may be leveraged for demonstrating topic coverage for accreditation purposes. Learning objectives are individually searchable to demonstrate topic coverage by objective across the curriculum. Resources are indexed and the repository is updated daily.

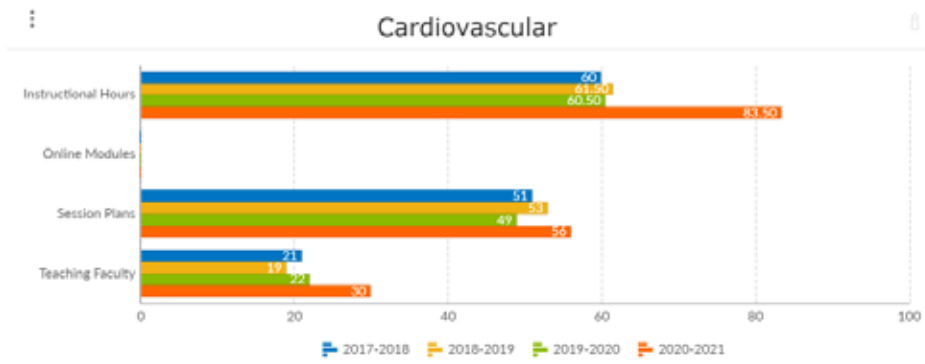
- Transformation, normalization, and optimization of the data to unification of 3+ data sources in one result
- Parsing on slide page level to identify the exact slide of topic coverage
- Link to lecture capture
- Machine auto-tagging of relevant contextual information (e.g., USMLE, LMCE Hot Topic)



## Analytics Intelligent Agent™

Analytics include insightful dashboards that transform your unstructured curricular content into actionable insights in the form of Curriculum Mapping Validation, Teaching Load reports, Student Progress Monitoring, Evaluation and Assessment review, and more. Insights are updated daily.

Acad Year	Course Code	Course Name	1.1	1.2	1.3	1.4	1.5	1.6
2023-2024	VP605 A	VP605 Cell Physiology (1199)	41	41	41			41
2023-2024	VP606 A	VP606 Gross Anatomy (1485)	34					34
2023-2024	VP607 A	VP607 Veterinary Systems (1769)	33	33	33			33
2023-2024	VP608 A	VP608 Veterinary Risk Control (Value) (1826)	14	14	14	7	14	29
2023-2024	VP635 A	VP635 Animal Care and Welfare (1595)						19
2023-2024	VC809 A	VC809 Vet Clinical Skills (1126)	18	4	7	7		7
2023-2024	VC809 B	VC809 Vet Clinical Skills (1127)				1		
2023-2024	VP644 A	VP644 Vet Pharmacology (1481)						
2023-2024	VC809 (A)	VC809 Vet Clinical Skills (1126)	3	1	7	7	2	1
2023-2024	VC809 (A)	VC809 Veterinary Skills (1126)		37				43
2023-2024	VC809 (A)	VC809 General Pathology (1474)						
2023-2024	VC809 (A)	VC809 Vet Parasitology (1494)	48	79				
2023-2024	VC809 (A)	VC809 Dis. Path. (1127)						
2023-2024	VC809 (A)	VC809 Medicine (1128)	18	18		18		
2023-2024	VC809 (A)	VC809 Four Areas Medicine (1129)	18	18	18		17	18
2023-2024	VC809 (A)	VC809 Therapeutics (1189)	28	28	28		19	11
2023-2024	VC809 (A)	VC809 Vet Surgery (1190)	17	49	49			49
2023-2024	VC809 (A)	VC809 Vet Surgery (1191)						
2023-2024	VC809 (A)	VC809 Equine Path Medicine (1192)						
2023-2024	VC809 (A)	VC809 Soft Clinical Skills (1193)	14	14	14		14	2
2023-2024	VC809 (A)	VC809 Ethics and Professional (1194)						7
2023-2024	VC809 (A)	VC809 Ethics and Professional (1195)						7
2023-2024	Total Courses With Competency		12	12	8	8	8	12



Banner Id ...  
 N/A ✕ ▼

JANE SMITH



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 Academic Level: Med3  
 Advisors: Ian Clark  
 Bio: Medical student, year 1

Contact Summary

2019-10-08 Scheduled check-in. In-person (1:1).  
 Main topics of conversation (check all that apply): Academic, Career, Professionalism, Well-being Meeting summary: Initial ...

[Form](#) | [Log](#)

Remediation

[Form](#) | [Log](#)

Doctoring Feedback

[Form](#) | [Log](#)

Pre-Clinical 📄

Course	Grade Comparison	Final Grade	SPE Overall	SPE Strengths
<a href="#">Cardiovascular (19-20)</a>	83.26	86.93	S	Offered thoughtful differential diagnoses.
<a href="#">Clinical Skills Clerkship (19-20)</a>			S	Contributed meaningfully throughout the CSC snf even made Participated in all discussions.
<a href="#">Endocrine Sciences (19-20)</a>	73.53	87.52	S	-Willing learner, asked intelligent questions.
<a href="#">Gastroenterology (19-20)</a>	78	85.43	S	Attentive, <b>engaged</b> with the lab-communicates clearly.
<a href="#">Histology (18-19)</a>	75.93	87.94	S	Great job, keep up the good work.
<a href="#">Human Anatomy I (18-19)</a>	87.68	87.56	S	Great work in the lab throughout the semester.
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Clinical 📄

Course Name	Exam Name	Section	Grade
Clerkship I	OSCE 2	Medical Interviewing & Communication Skills	2
Clerkship I	OSCE 2	Professionalism Skills	2
Clerkship I	OSCE 3	Interstation	2
Clerkship I	OSCE 3	Medical Interviewing & Communication Skills	2
Clerkship I	OSCE 3	Oral Presentation Skills	2

## Conclusion

Leveraging the power of Artificial Intelligence and Machine Learning, schools are able to paint a more-cohesive picture of content coverage and verify the success of learning initiatives and activities. Across educational environments, AI is becoming a need-to-have in creating efficient learning, customized learning, and evidence-based learning solutions that also provide necessary insights to enable the success of didactic and interactive teaching methods and programs. More than 100,000 UGME students and countless faculty have engaged with this automated system, shifting the medical education paradigm.

To schedule a demo or for more information, visit [iseek.ai](http://iseek.ai) or call 866.773.9003

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