

SKEDGE

**Smarter course scheduling for our
University of Rochester**

Dan Hassin

Supervised by Professor Philip Guo

Department of Computer Science
University of Rochester
Rochester, New York

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Abstract

In this paper I present Skedge, a web application for students to comfortably and effectively engage with the University's course catalog. Skedge matches and surpasses the capabilities of the existing University tool for this purpose, "Course Description / Course Schedule" (CDCS) and presents its information in a more visually pleasing way. As a result, Skedge boasts strong user-retention rates, long session durations, and high student adoption despite having virtually no advertisement. Through collected usage data, I demonstrate that a) Skedge's differences from and additions to CDCS are usable and have real need, b) the two major use-cases associated with course browsing—direct search and exploratory search—are effectively accommodated by Skedge, and c) Skedge's search mechanism is user-friendly and self-teaches to users over time.

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Chapter 1


Introduction

This paper will begin by discussing Markov chains and how we set out to use them for our goal of creating an assistive program editor. We will then describe in detail how we implemented a Markov chain to house program syntax trees, how we were able to generate code using it, and finally we'll discuss our results and address the limitations of our product.

1.1 Introduction

1.1.1 Markov chain

A Markov chain is a mathematical system that undergoes a stochastic process whereby



COURSE DESCRIPTION
COURSE SCHEDULE

Course Description / Course Schedule (CDCS)

Search

Year/Term: (Required)
 Fall 2016

School:

Subject:

Course: (MTH 162 or MTH or 162)
 csc

Course Type:

Status:

Description - Keywords:

Title:

Instructor Name:

Day: ☐ M ☐ T ☐ W ☐ R ☐ F ☐ S ☐ U

Start Time Between:

Credit Hours Between:

Division:

☐ Upper Level Writing Courses
☐ Diversity Courses

Arts, Sciences, and Engineering
Computer Science

CRN	Course	Course Title	Term	Credits	Status
49714	CSC 131	RECREATIONAL GRAPHICS	Fall 2016	4.0	Closed

Schedule: Day: TR Begin: 1105 End: 1220 Building: HARK Room: 114

Enrollment: Section: 28 Enroll: 28 Section Cap: 28

Instructors: PAWLICKI T

Prerequisites: None

Description: A hands on introduction to 3D computer graphics and animation techniques taught from a user point of view. Topics include 3D modeling, animation, and simulation. Assessment based on projects. No written exams.

Clusters: N4CSC013, N4CSC014

CRN	Course	Course Title	Term	Credits	Status
49723	CSC 161	INTRO TO PROGRAMMING	Fall 2016	4.0	Open

Schedule: Day: TR Begin: 1915 End: 1930 Building: B&L Room: 109

Enrollment: Section: 32 Enroll: 115 Section Cap: 115

Class Info: YOU MUST REGISTER FOR A LAB & WORKSHOP WHEN REGISTERING FOR THE MAIN SECTION.

Instructors: SARKIS R; STJACQUES R

Prerequisites: None

Description: Organized thinking, creative problem solving, and the precise description of solutions are valuable skills in academia and life. The formulation and solution of problems using computers is increasingly important in all artistic and scholarly fields. We introduce core concepts and techniques of programming as a way to develop these skills, as basis for further CS study, and for application to other fields. Lab required.

Clusters: N4CSC013, N4CSC015, N4CSC016, N4CSC017, N4CSC018, N4ECE001

CRN	Course	Course Title	Term	Credits	Status
78686	CSC 161	INTRO TO PROGRAMMING	Fall 2016	4.0	Open

Schedule: Day: MW Begin: 1650 End: 1805 Building: GRGEN Room: 101

Enrollment: Section: 53 Enroll: 115 Section Cap: 115

Class Info: YOU MUST REGISTER FOR A LAB & WORKSHOP WHEN REGISTERING FOR THE MAIN SECTION.

Instructors: STJACQUES R; SARKIS R

Prerequisites: None

skedge

Choose a schedule:
 Spring 2016

Fall 2016

CSC 131: Recreational Graphics 4 credits

A hands on introduction to 3D computer graphics and animation techniques taught from a user point of view. Topics include 3D modeling, animation, and simulation. Assessment based on projects. No written exams.

Add Section

Time & Place: Tues/Thurs 11:05am-12:20pm, HARK 114
Instructor: Pawlicki T **CRN:** 49714

28/28 enrolled

CSC 161: Intro to Programming 4 credits

Comments: YOU MUST REGISTER FOR A LAB & WORKSHOP WHEN REGISTERING FOR THE MAIN SECTION.

Organized thinking, creative problem solving, and the precise description of solutions are valuable skills in academia and life. The formulation and solution of problems using computers is increasingly important in all artistic and scholarly fields. We introduce core concepts and techniques of programming as a way to develop these skills, as basis for further CS study, and for application to other fields. Lab required.

Add Section

Time & Place: Tues/Thurs 6:15pm-7:30pm, B&L 109
Instructor: Sarkis R, St Jacques R **CRN:** 49723

32/115 enrolled

Add Section

Time & Place: Mon/Wed 4:50pm-6:05pm, GRGEN 101
Instructor: St Jacques R, Sarkis R **CRN:** 78686

53/115 enrolled

Show 6 lab sections

12

M T W R F

1

2

3

REL 389W

4

5

MTH 165

6

MTH 165

7

8

2 sections / 8 credits

feedback

Figure 1.1: CDCS (top) and Skedge (bottom) for the search query csc.

Chapter 2

Grievances

lol

Chapter 3

Analytics

hi

Chapter 4

Conclusions

Source code

The source code for Skedge is available online under an open source license:

`https://github.com/RocHack/skedge`.

Live site

The site can be found at: `http://skedgeur.com`.

Bibliography

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Appendix