

System obliczający wyniki wyborów dla uogólnienia systemu k-Borda

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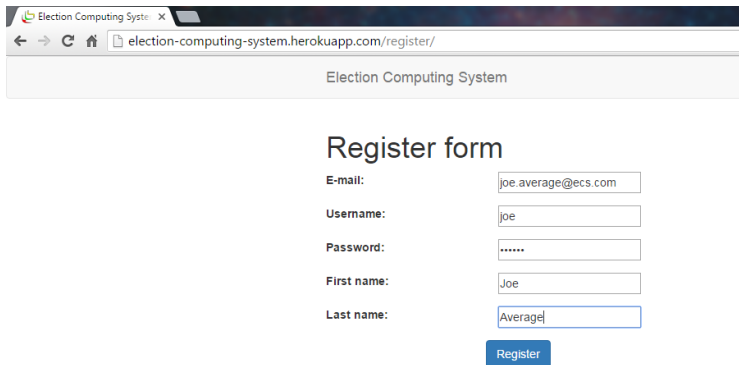
Projekt realizowany pod opieką
dr. hab. inż. Piotra Faliszewskiego

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Plan

- 1 Rejestracja
 - Rejestracja
- 2 Tworzenie wyborów
 - Pobieranie danych z pliku
 - Generowanie z rozkładu normalnego
- 3 Obliczanie wyników
 - dla wyborów z pliku
 - dla wyborów z rozkładu normalnego
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 - usuwanie wyborów
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Dane użytkownika



The screenshot shows a web browser window with the title "Election Computing System" and the URL "election-computing-system.herokuapp.com/register/". The page content includes a header "Election Computing System" and a main section titled "Register form". The form contains five input fields: "E-mail:" with the value "joe.average@ecs.com", "Username:" with the value "joe", "Password:" with masked characters "*****", "First name:" with the value "Joe", and "Last name:" with the value "Average". A blue "Register" button is located below the last name field.

Election Computing System

Register form

E-mail:

Username:

Password:

First name:

Last name:

Uwierzytelnianie

Django dostarcza w pełni funkcjonalny system uwierzytelniania. Zapewnia obsługę kont, grup oraz uprawnień użytkowników.

Rejestracja
Tworzenie wyborów
Obliczanie wyników
Usuwanie wyborów
Podsumowanie

Pobieranie danych z pliku
Generowanie z rozkładu normalnego

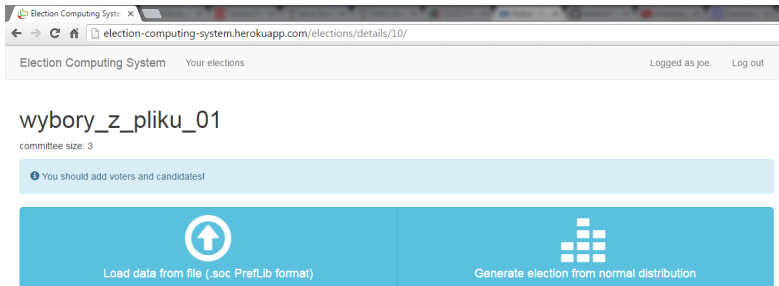
Panel dodawania wyborów

The screenshot shows a web browser window with the title "Election Computing System". The address bar shows the URL "election-computing-system.herokuapp.com/elections/list/". The page has a navigation bar with "Election Computing System" and "Your elections" tabs, and a user status "Logged as joe. Log out". The main heading is "Your elections". Below it is a table with columns: Name, Candidates, Voters, Results, and Actions. A green button labeled "+ New election" is located in the Actions column.

Name	Candidates	Voters	Results	Actions
+ New election				

Dodawanie wyborów

- Z pliku
- Z rozkładu normalnego
- ?



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Generowanie z rozkładu normalnego

Pobieranie danych z pliku

The screenshot shows a web browser window with the address bar displaying 'election-computing-system.herokuapp.com/elections/new/'. The page title is 'Election Computing System' and the user is logged in as 'joe'. The main heading is 'Create new election'. There are two input fields: 'Name:' with the value 'wybory_z_pliku_01' and 'Committee size:' with the value '3'. A blue 'Create election' button is at the bottom.

Election Computing System Your elections Logged as joe Log out

Create new election

Name:

Committee size:

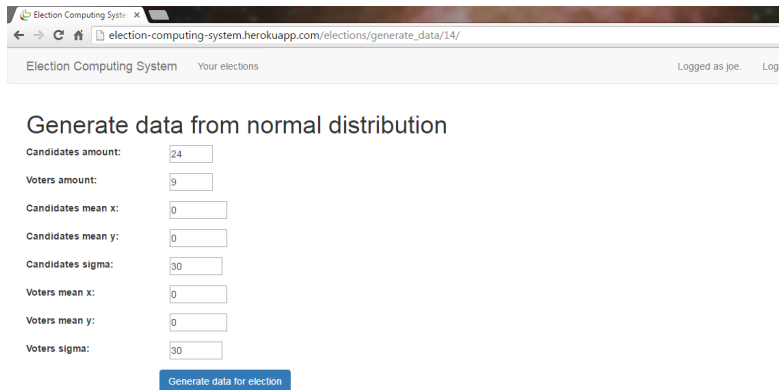
[Create election](#)

Dane gotowe do obliczania wyborów

The screenshot shows the 'Election Computing System' interface. The main heading is 'wybory_z_pliku_02'. A green box indicates 'Successfully added election data from file!' with details: 4 candidates, 1814 voters, and 24 unique votes. Below this, the committee size is 2. The 'Available results' section has a 'Collapse/expand results listing' button and an 'Add new result' link. The 'Voters listing' section also has a 'Collapse/expand voters listing' button. A blue box highlights a list of candidates and their vote counts, with a file icon and 'ED-00004-00000196.soc' in the top right corner of the box.

Candidate	Votes
1, Dirty Dancing	1814, 1814, 24
2, Maid in Manhattan	491, 3, 4, 1, 2
3, Shrek (Full-screen)	397, 3, 1, 4, 2
4, Father of the Bride	222, 3, 4, 2, 1
	138, 1, 3, 4, 2
	101, 3, 1, 2, 4
	87, 3, 2, 4, 1
	64, 4, 3, 1, 2
	58, 1, 3, 2, 4
	47, 3, 2, 1, 4
	45, 4, 3, 2, 1
	37, 1, 4, 3, 2
	32, 4, 1, 3, 2
	26, 1, 4, 2, 3
	13, 1, 2, 4, 3
	12, 4, 1, 2, 3
	11, 4, 2, 1, 3
	8, 2, 3, 4, 1
	7, 1, 2, 3, 4
	6, 2, 3, 1, 4
	4, 4, 2, 3, 1
	4, 2, 1, 3, 4
	2, 2, 1, 4, 3
	1, 2, 4, 3, 1
	1, 2, 4, 1, 3

Ustalanie parametrów populacji



The screenshot shows a web browser window with the URL `election-computing-system.herokuapp.com/elections/generate_data/14/`. The page title is "Election Computing System" and the user is logged in as "Joe". The main heading is "Generate data from normal distribution". Below this, there are input fields for various parameters, each with a label and a text box containing a value. At the bottom, there is a blue button labeled "Generate data for election".

Parameter	Value
Candidates amount:	24
Voters amount:	9
Candidates mean x:	0
Candidates mean y:	0
Candidates sigma:	30
Voters mean x:	0
Voters mean y:	0
Voters sigma:	30

Generate data for election

Ustalanie parametrów populacji...

Election Computing System Your elections

Generate data from normal distribution

Candidates amount:

Voters amount:

Candidates mean x: Wartość nie może być większa niż 50.

Candidates mean y:

Candidates sigma:

Voters mean x:

Voters mean y:

Voters sigma:

[Generate data for election](#)

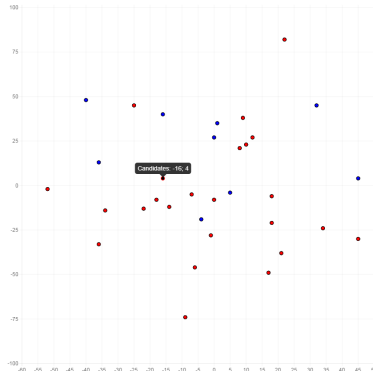
- ograniczenia na ilość wierszy w bazie danych
- brak możliwości określenia timeoutu...

Wykres

z_rozkładu_01

committee size: 3

Chart



Ulepszenie sposobu prezentacji

- dodatkowe informacje o punkcie
- inne sposoby generowania wykresów...

Lista preferencji

Available results

Collapse/expand results listing
1 - Brute force - 3.892759s
20 - Brute force - 8.626438s
Add new result

Voters listing

Collapse/expand voters listing
<p>tx 1 - Eva [15], 2 - Gloria [17], 3 - Lynn [8], 4 - Wilbert [22], 5 - Joshua [2], 6 - Shelby [19], 7 - Virginia [1], 8 - Todd [14], 9 - Dennis [3], 10 - Samuel [11], 11 - Tracy [13], 12 - Mark [4], 13 - Victoria [21], 14 - Tony [5], 15 - Daniel [24], 16 - Gregory [16], 17 - Ruby [6], 18 - Edith [13], 19 - Nancy [12], 20 - Jane [23], 21 - Michelle [8], 22 - Pamela [7], 23 - Linda [20], 24 - Paul [10]</p> <p>tx 1 - Linda [20], 2 - Pamela [7], 3 - Dennis [3], 4 - John [23], 5 - Gregory [16], 6 - Ruby [6], 7 - Edith [13], 8 - Joshua [2], 9 - Tracy [13], 10 - Wilbert [22], 11 - Shelby [19], 12 - Lynn [8], 13 - Gloria [17], 14 - Paul [10], 15 - Todd [14], 16 - Victoria [21], 17 - Eva [15], 18 - Virginia [1], 19 - Samuel [11], 20 - Daniel [24], 21 - Mark [4], 22 - Tony [5], 23 - Nancy [12], 24 - Michelle [8]</p> <p>tx 1 - Gregory [16], 2 - Ruby [6], 3 - Edith [13], 4 - Pamela [7], 5 - Dennis [3], 6 - Linda [20], 7 - Wilbert [22], 8 - Gloria [17], 9 - Todd [14], 10 - Joshua [2], 11 - Lynn [8], 12 - Shelby [19], 13 - Virginia [1], 14 - Tracy [13], 15 - Eva [15], 16 - Paul [10], 17 - John [23], 18 - Daniel [24], 19 - Mark [4], 20 - Victoria [21], 21 - Nancy [12], 22 - Samuel [11], 23 - Tony [5], 24 - Michelle [8]</p> <p>tx 1 - Todd [14], 2 - Daniel [24], 3 - Nancy [12], 4 - Virginia [1], 5 - Ruby [6], 6 - Edith [13], 7 - Gregory [16], 8 - Gloria [17], 9 - Mark [4], 10 - Pamela [7], 11 - Wilbert [22], 12 - Eva [15], 13 - Tony [5], 14 - Dennis [3], 15 - Lynn [8], 16 - Joshua [2], 17 - Shelby [19], 18 - Samuel [11], 19 - Tracy [13], 20 - Linda [20], 21 - Paul [10], 22 - Victoria [21], 23 - Michelle [8], 24 - John [23]</p> <p>tx 1 - Pamela [7], 2 - Edith [13], 3 - Ruby [6], 4 - Gregory [16], 5 - Linda [20], 6 - Dennis [3], 7 - Wilbert [22], 8 - Gloria [17], 9 - Todd [14], 10 - Joshua [2], 11 - Lynn [8], 12 - Paul [10], 13 - Shelby [19], 14 - Virginia [1], 15 - Tracy [13], 16 - Eva [15], 17 - John [23], 18 - Daniel [24], 19 - Mark [4], 20 - Victoria [21], 21 - Nancy [12], 22 - Samuel [11], 23 - Tony [5], 24 - Michelle [8]</p> <p>tx 1 - Dennis [3], 2 - John [23], 3 - Tracy [13], 4 - Joshua [2], 5 - Shelby [19], 6 - Lynn [8], 7 - Linda [20], 8 - Wilbert [22], 9 - Gloria [17], 10 - Gregory [16], 11 - Victoria [21], 12 - Ruby [6], 13 - Edith [13], 14 - Pamela [7], 15 - Eva [15], 16 - Todd [14], 17 - Virginia [1], 18 - Samuel [11], 19 - Mark [4], 20 - Daniel [24], 21 - Tony [5], 22 - Paul [10], 23 - Michelle [8], 24 - Nancy [12]</p> <p>tx 1 - Linda [20], 2 - Pamela [7], 3 - Gregory [16], 4 - Edith [13], 5 - Ruby [6], 6 - Dennis [3], 7 - Wilbert [22], 8 - Joshua [2], 9 - Gloria [17], 10 - Lynn [8], 11 - Shelby [19], 12 - John [23], 13 - Paul [10], 14 - Tracy [13], 15 - Todd [14], 16 - Eva [15], 17 - Virginia [1], 18 - Victoria [21], 19 - Daniel [24], 20 - Mark [4], 21 - Samuel [11], 22 - Nancy [12], 23 - Tony [5], 24 - Michelle [8]</p>

• powiązanie danych z punktami

Konfiguracja obliczeń

The screenshot shows a web browser window with the URL `election-computing-system.herokuapp.com/elections/add_result/10/`. The page title is "Election Computing System" and the user is logged in as "joe". The main heading is "Calculate new result for election 'wybory_z_pliku_01'". Below this, there are two input fields: "P parameter:" with an empty text box, and "Algorithm:" with a dropdown menu showing "-----". A blue button labeled "Add new result" is positioned below the "Algorithm:" field.

- możliwość wyboru algorytmu...
- możliwość wyboru parametru

Rezultaty

The screenshot shows a web browser window with the URL `election-computing-system.herokuapp.com/elections/details/12/`. The page title is "Election Computing System" and the subtitle is "Your elections". The main heading is "wybory_z_pliku_02" with a subtitle "committee size: 2". Under the heading "Available results", there is a button "Collapse/expand results listing". Below this, a table lists results:

1 - Brute force - 0.04713s
1 - Genetic - 0.026474s
20 - Brute force - 0.060342s
20 - Genetic - 0.039266s

At the bottom of the results section is a button "Add new result". Below the results section is the heading "Voters listing" with a button "Collapse/expand voters listing".

- wybrany parametr p
- zastosowany algorytm
- czas wykonania obliczeń
- wyniki wyborów pod linkiem

Komitet

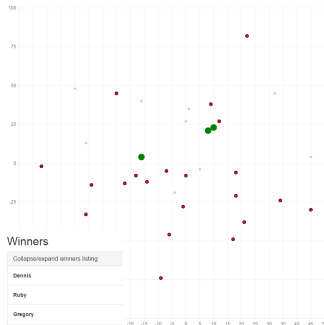
The image displays two side-by-side browser windows showing the 'Election Computing System' interface. Both windows show the URL 'election-computing-system.herokuapp.com/elections/result/18/' and 'election-computing-system.herokuapp.com/elections/result/20/' respectively. The main heading is 'Result of wybory_z_pliku_02 with p=1'. Below this, the word 'Winners' is displayed. A table with three columns is shown: 'Collapse/expand winners listing', 'Shrek (Full-screen)', and 'Father of the Bride'. The table is empty, suggesting no winners have been recorded for this election.

Rezultaty

Wykres z zaznaczonymi zwycięzcami wyborów

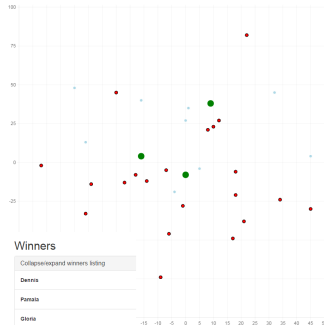
Result of z_rozkładu_01 with p=1

Chart

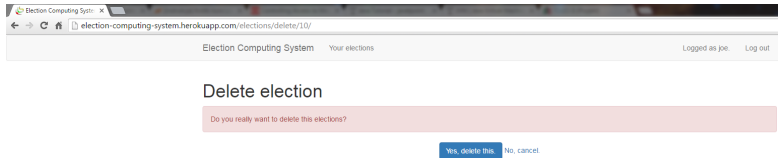


Result of z_rozkładu_01 with p=20

Chart



Usuwanie całych wyborów



- możliwość usuwania pojedynczych rezultatów w ramach wyborów

Podsumowanie

- implementacja wydajniejszych algorytmów
- ulepszenie sposobu wyświetlania wyników
- dodanie obliczania wyników wyborów w tle
- możliwość malowania wykresów przez użytkownika
- dynamiczna zmiana parametru p

Dziękujemy za uwagę