

# Biyometrik Parmak İzinin Akıllı Kartlarla Kullanımı ve Uygulaması

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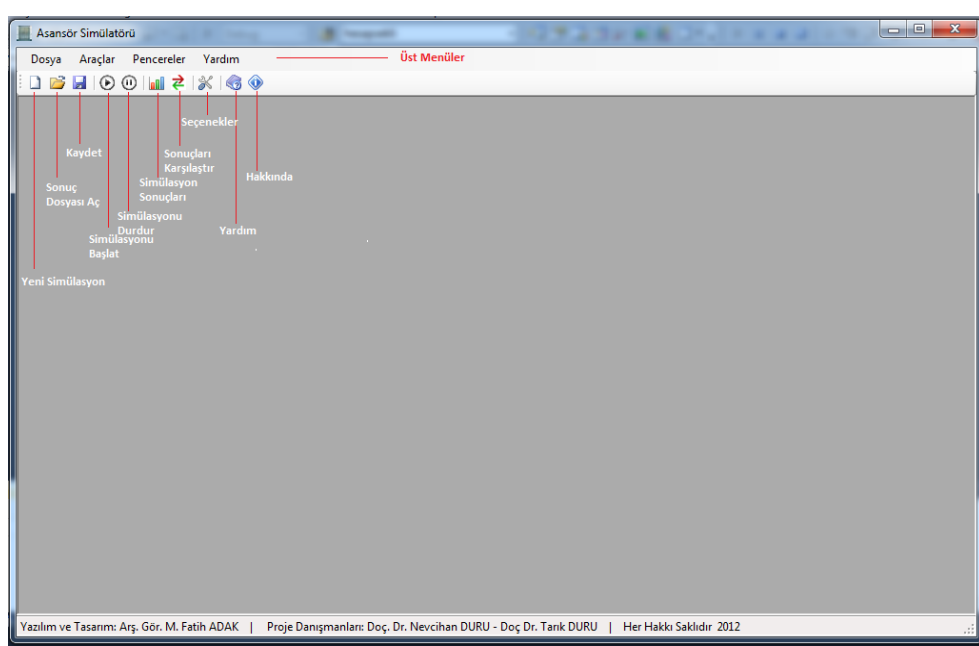
## Giriş

Binalardaki Perhaps the most enjoyable emotion, however, was the sense of personal fulfillment. When it came to hacking, Stallman was a natural. A childhood's worth of late-night study sessions gave him the ability to work long hours with little sleep. As a social outcast since age 10, he had little difficulty working alone. And as a mathematician with built-in gift for logic and foresight, Stallman possessed the ability to circumvent design barriers that left most hackers spinning their wheels. Perhaps the most enjoyable emotion, however, was the sense of personal fulfillment. When it came to hacking, Stallman was a natural. A childhood's worth of late-night study sessions gave him the ability to work long hours with little sleep. As a social outcast since age 10, he had little difficulty working alone. And as a mathematician with built-in gift for logic and foresight, Stallman possessed the ability to circumvent design barriers that left most hackers spinning their wheels. Perhaps the most enjoyable emotion, however, was the sense of personal fulfillment. When it came to hacking, Stallman was a natural. A childhood's worth of late-night study sessions gave him the ability to work long hours with little sleep. As a social outcast since age 10, he had little difficulty working alone. And as a mathematician with built-in gift for logic and foresight, Stallman possessed the ability to circumvent design barriers that left most hackers spinning their wheels.

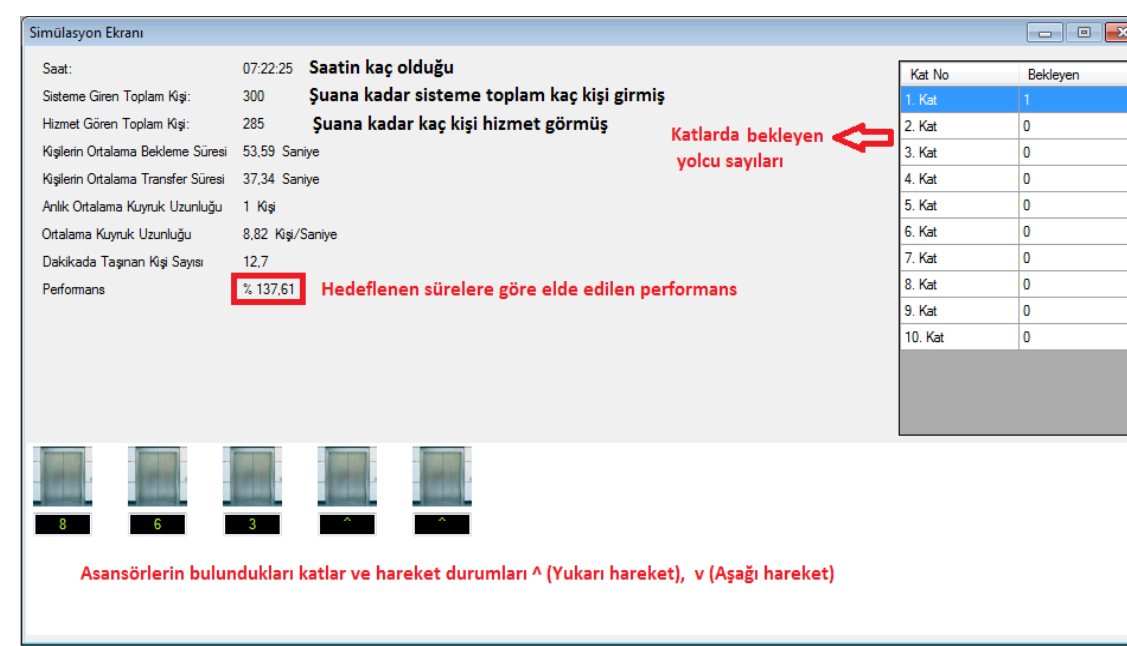
Çizelge 1: analiz sonuçları

k	Average $\phi$		Minimum $\phi$		Average T	
	k-means	k-means++	k-means	k-means++	k-means	k-means++
10	$1.365 \cdot 10^3$	8.47%	$1.174 \cdot 10^5$	0.93%	0.12	-46.72%
25	$4.233 \cdot 10^4$	99.96%	$1.914 \cdot 10^4$	99.92%	0.90	87.79%
50	$7.750 \cdot 10^3$	99.81%	$1.474 \cdot 10^1$	0.53%	2.04	-1.62%

## Geliştirilen Yazılım



Şekil 1: Simülâtörün ana ekranı.



Şekil 2: Simülasyon ekranı.

Asansör Perhaps the most enjoyable emotion, however, was the sense of personal fulfillment. When it came to hacking, Stallman was a natural. A childhood's worth of late-night study sessions gave him the ability to work long hours with little sleep. As a social outcast since age 10, he had little difficulty working alone. And as a mathematician with built-in gift for logic and foresight, Stallman possessed the ability to circumvent design barriers that left most hackers spinning their wheels. Perhaps the most enjoyable emotion, however, was the sense of personal fulfillment. When it came to hacking, Stallman was a natural.

## Kullanılan Yöntem

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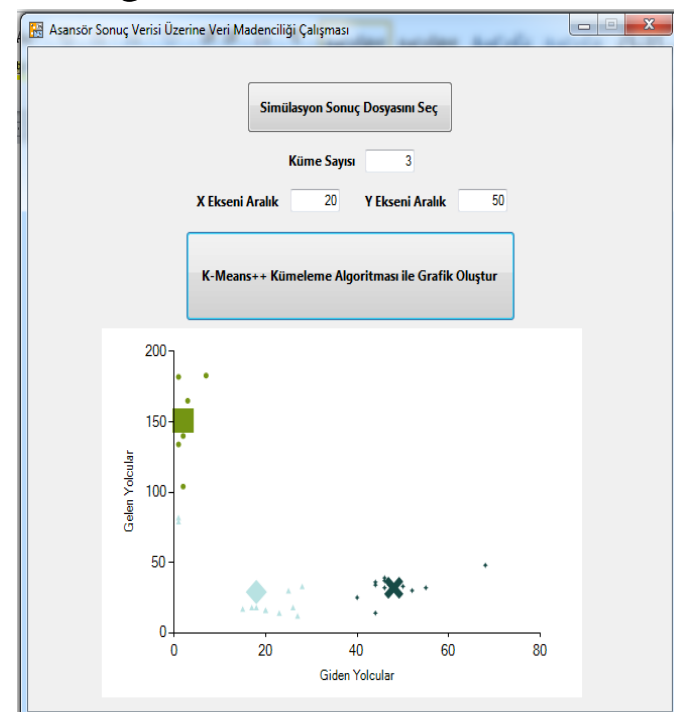
Hizmet Gören Kişiler	Toplam: 2008		
Kat	Bin	İn	Asansöre Giriş
1. Kat	2	2	08:03:00
2. Kat	1	2	08:03:05
3. Kat	1	2	08:03:10
4. Kat	1	2	08:03:15
5. Kat	1	2	08:03:20
6. Kat	1	2	08:03:25
7. Kat	1	2	08:03:30
8. Kat	1	2	08:03:35
9. Kat	1	2	08:03:40
10. Kat	1	2	08:03:45
11. Kat	1	2	08:03:50
12. Kat	1	2	08:03:55

Şekil 3: Üretilen veri örneği.

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## Geliştirilen Ek Program

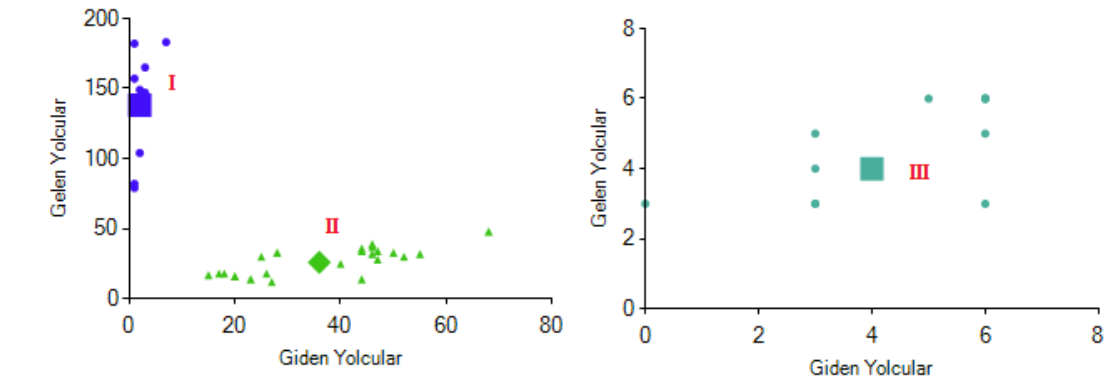
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Şekil 4: Ek program görüntüsü.

## Oluşabilecek Durumlar

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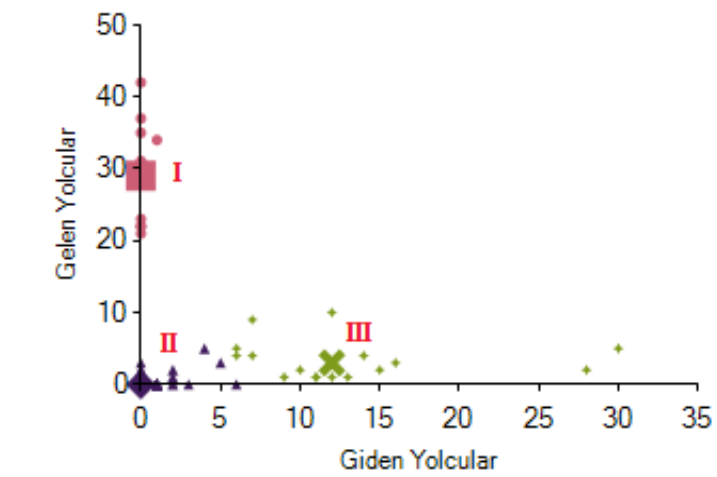


Şekil 5: Kümeleme sonucunda oluşabilecek durumlar.

## Bir Okul Örneği

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Saat Dilimi	Trafik Türü	Dağılımdaki Yolcu Sayısı
8:00 – 9:00	Yukarı Yoğun	20
9:00 – 10:00	Yukarı Yoğun	1
10:00 – 11:00	Yok	-
11:00 – 12:00	Yok	-
12:00 – 13:00	İki Yönlü Trafik	12
13:00 – 14:00	Yok	-
14:00 – 15:00	Yok	-
15:00 – 16:00	Aşağı Yoğun	20
16:00 – 17:00	Aşağı Yoğun	1



Şekil 6: Okulun asansör trafiği için kümeleme sonucu

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## Sonuçlar

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## Ek A

Hizmet Gören Kişiler				Toplam: 1051	
Kişi	Bindiği Kat	İndiği Kat	Asansöre Giriş	Kat	Yön
1. Kişi	1	2	08:03:19	1	YUKARI
2. Kişi	1	2	08:03:19	4	YUKARI
3. Kişi	1	2	08:03:19	1	YUKARI
4. Kişi	1	2	08:03:19	1	YUKARI
5. Kişi	1	3	08:03:19	4	YUKARI
6. Kişi	1	3	08:03:19	1	YUKARI
7. Kişi	1	2	08:03:20	2	YUKARI
8. Kişi	1	2	08:03:20	1	YUKARI
9. Kişi	1	2	08:03:20	3	YUKARI
10. Kişi	1	2	08:03:20	1	YUKARI
11. Kişi	1	4	08:03:19	1	YUKARI
12. Kişi	1	3	08:03:20	1	YUKARI

Yapılan Çağrılar			Toplam: 421	
Kat	Yön	Çağrı Zamanı	Kat	Yön
1	YUKARI	08:03:19	1	YUKARI
4	YUKARI	08:03:19	1	YUKARI
1	YUKARI	08:03:19	1	YUKARI
1	YUKARI	08:03:20	4	YUKARI
1	YUKARI	08:03:49	1	YUKARI
1	YUKARI	08:06:41	2	YUKARI
1	YUKARI	08:06:41	3	YUKARI
1	YUKARI	08:06:41	1	YUKARI
1	YUKARI	08:06:59	1	YUKARI
1	YUKARI	08:07:11		