

Kauno technologijos universitetas
Informatikos fakultetas

Laboratorinis darbas Nr. 1

P175B120 Paslaugų programavimas debesų kompiuterijoje

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Studentas

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Dėstytojas

Kaunas, 2024

Turinys

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1 Pirma dalis

Home > Virtual machines

Kaunas University of Technology (studuokiamicrosoft.com)

+ Create Switch to classic Reservations Manage view Refresh Export to CSV Open query Assign tags Start Restart Stop Delete Services Maintenance

Filter for any field... Subscription equals all Type equals all Resource group equals all Location equals all Add filter

Showing 1 to 3 of 3 records. No group

Name	Type	Subscription	Resource group	Location	Status	Operating system	Size	Public IP address
AD	Virtual machine	Azure for Students	1_1_Armaz	East Asia	Running	Windows	Standard_E2s	20.6.128.59
IS	Virtual machine	Azure for Students	1_1_Armaz	East Asia	Running	Windows	Standard_DS1_v2	20.2.83.147
SQL	Virtual machine	Azure for Students	1_1_Armaz	East Asia	Running	Windows	Standard_E2s	20.2.83.59

1 pav. Sukurtos virtualios mašinos - AD, IS ir SQL.

Home > Virtual machines > Virtual machines

Kaunas University of Technology (studuokiamicrosoft.com)

+ Create Switch to classic

Filter for any field...

Name

- AD
- IS
- SQL

Virtual machine: AD

Connect Start Restart Stop Hibernate (preview) Capture Delete Refresh Open in mobile Feedback CU / PS

Essentials

Resource group: 1_1_Armaz

Status: Running

Location: East Asia (Zone 1)

Subscription: Azure for Students

Subscription ID: 56426764-2876-4463-9784-0d0876e1885

Availability zone: 1

Tags: Reliability Add tags

Operating system: Windows (Windows Server 2019 Datacenter)

Size: Standard E2s (2 vcpus, 4 GiB memory)

Public IP address: 20.6.128.59

Virtual network/subnet: AD-vnet/default

DNS name: Not configured

Health state: OK

Properties

Virtual machine

Computer name: AD

Operating system: Windows (Windows Server 2019 Datacenter)

Image publisher: MicrosoftWindowsServer

Image offer: WindowsServer

Image plan: 2019-datacenter-gen2second

VM generation: V2

VM architecture: x64

Agent status: Ready

Agent version: 2.3.14140.11039

Information

Host group: -

Host: -

Proximity placement group: -

Colocation status: N/A

Capacity reservation group: -

Disk controller type: SCSI

Availability + scaling

Availability zone (az): 1

Availability set: -

Scale set: -

Security type

Security type: Trusted launch

Enable secure boot: Enabled

Enable vTPM: Enabled

Integrity monitoring: Disabled

Health monitoring

Health monitoring: Not enabled

Networking

Public IP address: 20.6.128.59 (Network interface ad095c_f1)

Private IP address: 10.0.0.4

Virtual network/subnet: AD-vnet/default

DNS name: Configure

Size

Size: Standard E2s

vCPUs: 2

RAM: 4 GiB

Disk

OS disk: AD_OsDisk_1_508950ee626415db10391afcbca09f4

Encryption at host: Disabled

Azure disk encryption: Not enabled

Ephemeral OS disk: N/A

Data disks: 0

Auto-shutdown

Auto-shutdown: Not enabled

Scheduled shutdown: -

Azure Spot

Azure Spot: -

Azure Spot eviction policy: -

Page 1 of 1

2 pav. AD virtualios mašinos nustatymai.

Virtual machines

Filter for any field...

Name: IS

AD, IS, SQL

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Connect

Get

Windows Admin Center

Networking

Network settings

Local balancing

Application security groups

Network manager

Settings

Disks

Extensions + applications

Configuration

Advisor recommendations

Properties

Locks

Availability + scale

Size

Availability + scaling

Security

Identity

Microsoft Defender for Cloud

Backup + disaster recovery

Backup

Disaster recovery

Operations

Auto-shutdown

Run command

Essentials

Resource group: IS-11-AD-11

Status: Running

Location: East Asia (Zone 1)

Subscription: Azure for Students

Subscription ID: 56428784-2878-4485-9784-0a878e1d85

Availability zone: 1

Tag: IS-11-AD-11

Operating system: Windows (Windows Server 2019 Datacenter)

Size: Standard D51 v2 (1 vcpu, 5.5 GB memory)

Public IP address: 20.283.187

Virtual network/subnet: AD-vnet/default

DNS name: host.configtest

Health state: -

Properties

Monitoring

Capabilities (0)

Recommendations

Tutorials

Virtual machine

Computer name: IS

Operating system: Windows (Windows Server 2019 Datacenter)

Image publisher: MicrosoftWindowsServer

Image offer: WindowsServer

Image plan: 2019-datacenter-gensecond

VM generation: V2

VM architecture: x64

Agent status: Ready

Agent version: 2.7.41491.1105

Hibernation: Disabled

Host group: -

Host: -

Proximity placement group: -

Colocation status: N/A

Capacity reservation group: -

Disk controller type: SCSI

Availability + scaling

Availability zone (az): 1

Availability set: -

Scale Set: -

Security type

Security type: Trusted launch

Enable secure boot: Enabled

Enable vTPM: Enabled

Integrity monitoring: Disabled

Health monitoring

Health monitoring: Not enabled

Networking

Public IP address: 20.283.187 (Network interface: IS17_1)

Private IP address (IPv4): 10.0.0.8

Private IP address (IPv6): -

Virtual network/subnet: AD-vnet/default

DNS name: host.configtest

Size

Size: Standard D51 v2

vCPUs: 1

RAM: 5.5 GB

Disks

OS disk: R2-DCH4_1_3470e4e229640a171e8b0e44a0a

Encryption at host: Disabled

Azure disk encryption: Not enabled

Ephemeral OS disk: N/A

Data disks: 0

Auto-shutdown

Auto-shutdown: Not enabled

Scheduled shutdown: -

Azure Spot

Azure Spot: -

Azure Spot eviction policy: -

3 pav. IS virtualios mašinos nustatymai.

Virtual machines

Filter for any field...

Name: SQL

AD, IS, SQL

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Connect

Connect

Get

Windows Admin Center

Networking

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Size

Availability + scaling

Security

Identity

Microsoft Defender for Cloud

Backup + disaster recovery

Backup

Disaster recovery

Operations

Auto-shutdown

Run command

Essentials

Resource group: IS-11-AD-11

Status: Running

Location: East Asia (Zone 1)

Subscription: Azure for Students

Subscription ID: 56428784-2878-4485-9784-0a878e1d85

Availability zone: 1

Tag: IS-11-AD-11

Operating system: Windows (Windows Server 2019 Datacenter)

Size: Standard B2s (2 vcpus, 4 GB memory)

Public IP address: 20.283.28

Virtual network/subnet: AD-vnet/default

DNS name: host.configtest

Health state: -

Properties

Monitoring

Capabilities (0)

Recommendations

Tutorials

Virtual machine

Computer name: SQL

Operating system: Windows (Windows Server 2019 Datacenter)

Image publisher: MicrosoftWindowsServer

Image offer: WindowsServer

Image plan: 2019-datacenter-gensecond

VM generation: V2

VM architecture: x64

Agent status: Ready

Agent version: 2.7.41491.1105

Hibernation: Disabled

Host group: -

Host: -

Proximity placement group: -

Colocation status: N/A

Capacity reservation group: -

Disk controller type: SCSI

Availability + scaling

Availability zone (az): 1

Availability set: -

Scale Set: -

Security type

Security type: Trusted launch

Enable secure boot: Enabled

Enable vTPM: Enabled

Integrity monitoring: Disabled

Health monitoring

Health monitoring: Not enabled

Networking

Public IP address: 20.283.28 (Network interface: IS230_1)

Private IP address (IPv4): 10.0.0.3

Private IP address (IPv6): -

Virtual network/subnet: AD-vnet/default

DNS name: host.configtest

Size

Size: Standard B2s

vCPUs: 2

RAM: 4 GB

Disks

OS disk: SQL_DCH4_1_7718e4e229640a171e8b0e44a0a

Encryption at host: Disabled

Azure disk encryption: Not enabled

Ephemeral OS disk: N/A

Data disks: 0

Auto-shutdown

Auto-shutdown: Not enabled

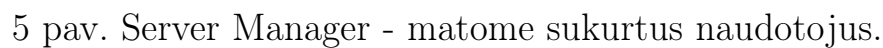
Scheduled shutdown: -

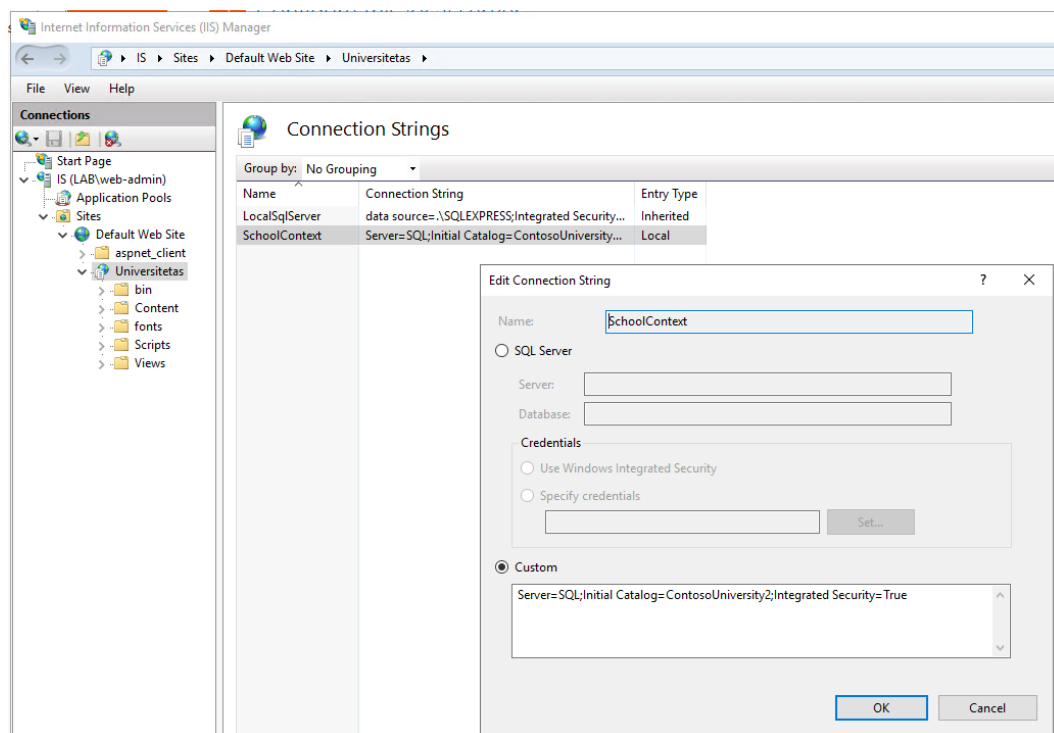
Azure Spot

Azure Spot: -

Azure Spot eviction policy: -

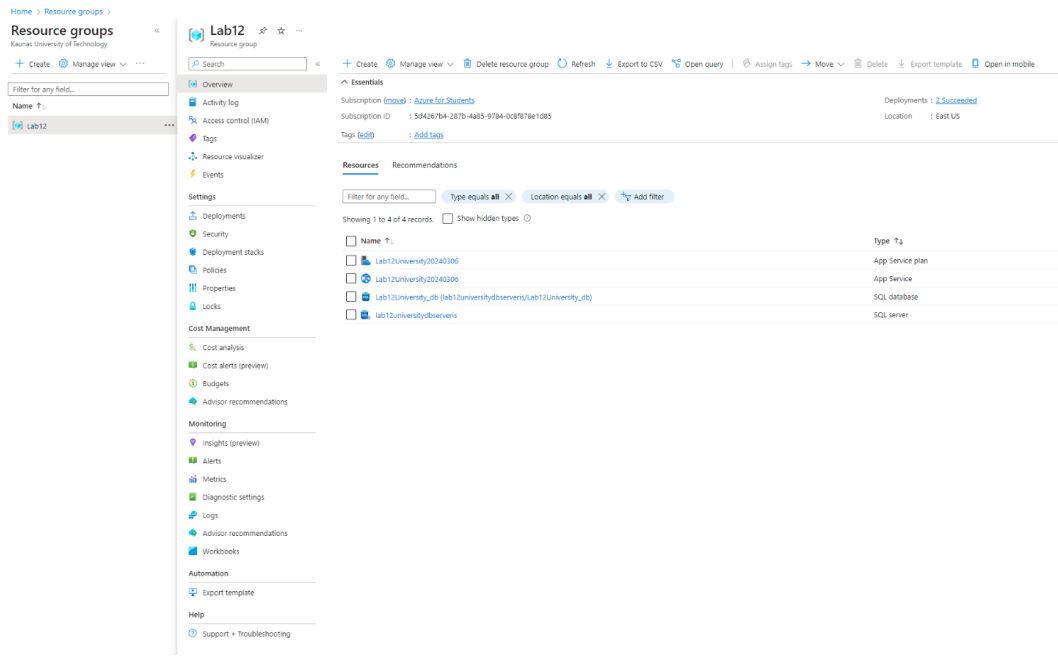
4 pav. SQL virtualios mašinos nustatymai.



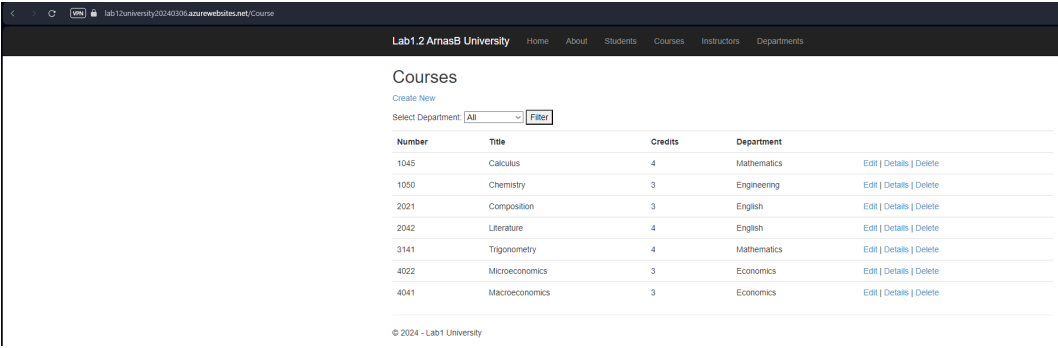


6 pav. Connection String.

2 Antra dalis



7 pav. Sukurta resursų grupė.



8 pav. Rezultatai tinklapyje - atidaryta ne VM localhost, o naudojant DNS.

Home > Resource groups > Lab12 >

lab12universitydbserveris

SQL server

Search

+ Create database + New elastic pool + New dedicated SQL pool (formerly SQL DW) + Import database [Reset password](#) [Move](#) [Delete](#) [Feedback](#)

Overview

Activity log

Access control (IAM)

Tags

Quick start

Diagnose and solve problems

Settings

Microsoft Entra ID

SQL databases

SQL elastic pools

DTU quota

Properties

Locks

Data management

Backups

Deleted databases

Failover groups

Import/export history

Security

Networking

Microsoft Defender for Cloud

Transparent data encryption

Identity

Auditing

Intelligent Performance

Essentials

Resource group [\(link\)](#): Lab12

Status: Available

Location: Germany West Central

Subscription [\(move\)](#): [Azure for Students](#)

Subscription ID: 56426764-2876-4a85-9784-0c8f87e1d85

Tags [\(edit\)](#) [Add tags](#)

Server admin: sqladmin

Networking: [Show networking settings](#)

Microsoft Entra admin: [Not configured](#)

Server name: lab12universitydbserveris.database.windows.net

Notifications (0) **Features (6)**

Microsoft Entra admin
Allows you to centrally manage identity and access to your Azure SQL databases.
NOT CONFIGURED

Microsoft Defender for SQL
Vulnerability Assessment and Advanced Threat Protection.
NOT CONFIGURED

Automatic tuning
Monitors and tunes your database automatically to optimize performance.
CONFIGURED

Auditing
Track database events and writes them to an audit log in Azure storage.
NOT CONFIGURED

Failover groups
Automatically manage and failover for a set of databases.
NOT CONFIGURED

Available resources

Filter by name

All types

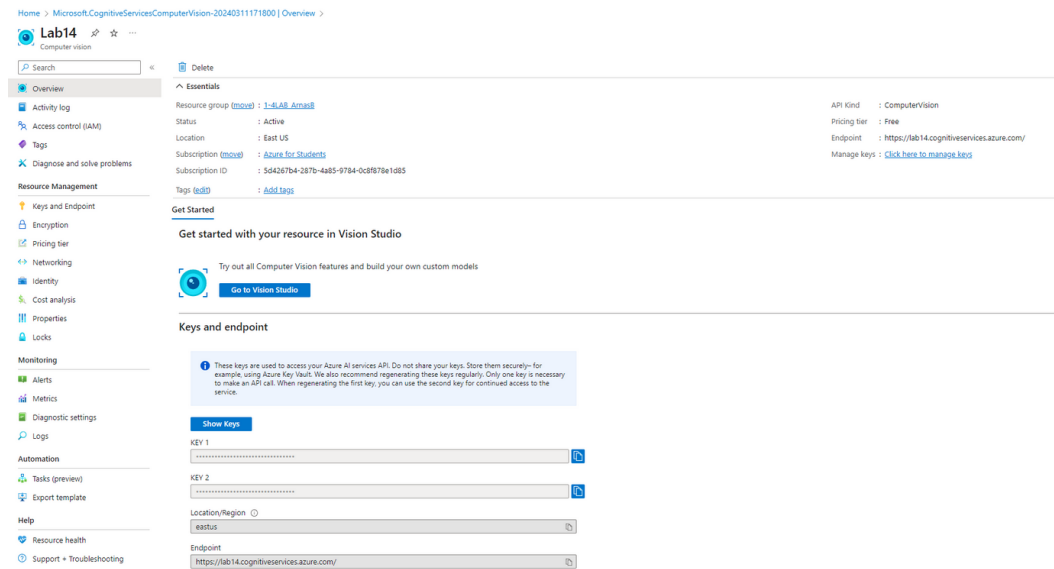
Name	Type	Status
Lab12university_db	SQL database	Online

9 pav. DB serverio nustatymai.

3 Trečia dalis

Neatlikta

4 Ketvirta dalis



10 pav. Computer Vision API nustatymai.

```
on:semstore.org/appsettings.json
{
  "AIServiceEndpoint": "https://lab14.cognitiveservices.azure.com/",
  "AIServiceKey": "***"
}
```

11 pav. Prisijungimui naudojami duomenys.

```

Analyzing images/building.jpg

Caption:
"people walking on a cobblestone street", Confidence 0.81

Dense Captions:
Caption: 'people walking on a cobblestone street', Confidence: 0.81
Caption: 'a clock with a black hands', Confidence: 0.65
Caption: 'a group of people walking on a sidewalk', Confidence: 0.79
Caption: 'a street light in front of a building', Confidence: 0.71
Caption: 'a dark room with a window', Confidence: 0.57
Caption: 'a man and a child holding hands on a cobblestone street', Confidence: 0.76
Caption: 'a window with a few panes', Confidence: 0.61
Caption: 'a close-up of a street light', Confidence: 0.82
Caption: 'a group of people holding hands walking down a sidewalk', Confidence: 0.78
Caption: 'a black door with a black frame', Confidence: 0.61

Tags:
'outdoor', Confidence: 1.00
'building', Confidence: 0.99
'clock', Confidence: 0.98
'sky', Confidence: 0.96
'ground', Confidence: 0.95
'town', Confidence: 0.87
'cobblestone', Confidence: 0.87
'alley', Confidence: 0.84
'street', Confidence: 0.83
'way', Confidence: 0.83
'city', Confidence: 0.76
'sidewalk', Confidence: 0.54

Objects:
"Wall clock"
"house"
Results saved in objects.jpg

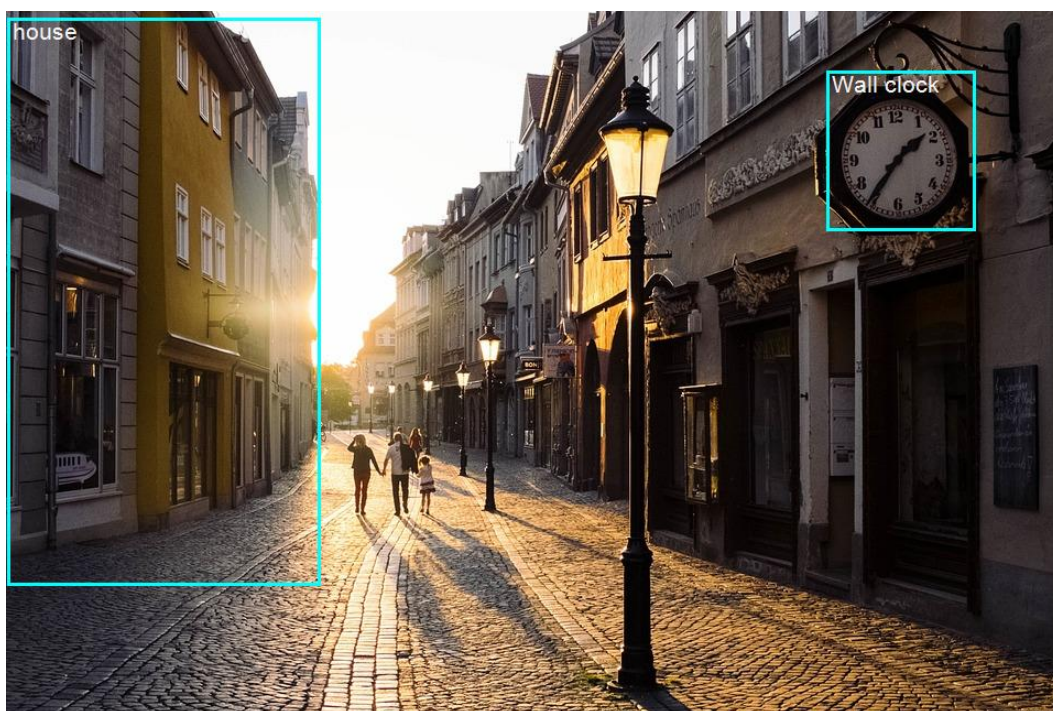
People:
Bounding box Top: 384, Left: 310, Width: 32, Height: 75, Confidence: 0.87
Bounding box Top: 381, Left: 340, Width: 34, Height: 77, Confidence: 0.85
Bounding box Top: 402, Left: 372, Width: 18, Height: 56, Confidence: 0.76
Bounding box Top: 377, Left: 366, Width: 13, Height: 35, Confidence: 0.61
Bounding box Top: 377, Left: 350, Width: 11, Height: 16, Confidence: 0.22
Bounding box Top: 376, Left: 346, Width: 10, Height: 16, Confidence: 0.03
Bounding box Top: 376, Left: 367, Width: 12, Height: 15, Confidence: 0.01
Bounding box Top: 376, Left: 344, Width: 19, Height: 27, Confidence: 0.01
Bounding box Top: 370, Left: 278, Width: 9, Height: 22, Confidence: 0.01
Bounding box Top: 386, Left: 310, Width: 8, Height: 14, Confidence: 0.00
Bounding box Top: 385, Left: 308, Width: 14, Height: 23, Confidence: 0.00
Bounding box Top: 377, Left: 368, Width: 17, Height: 60, Confidence: 0.00
Bounding box Top: 372, Left: 282, Width: 10, Height: 20, Confidence: 0.00
Bounding box Top: 375, Left: 376, Width: 8, Height: 16, Confidence: 0.00
Results saved in persons.jpg

Background removal:
Results saved in background.png

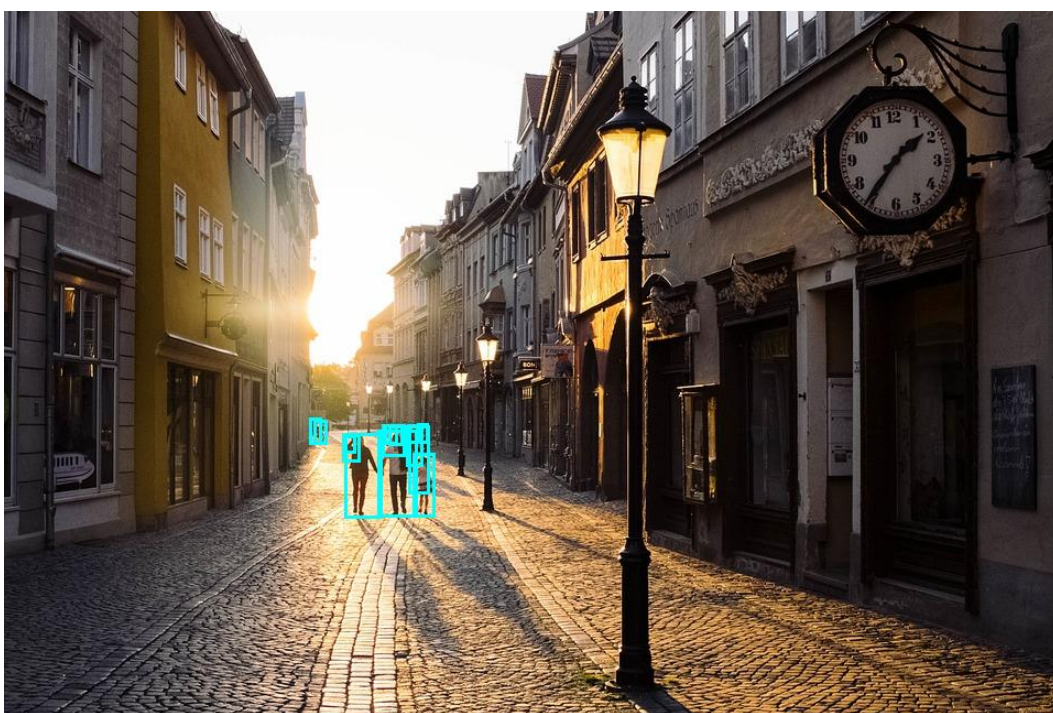
C:\Users\ignsu\Downloads\Lab1.4\Lab1.4\image-analysis\bin\Debug\netcoreapp7.0\image-analysis.exe (process 22128) exited with code 0.
Press any key to close this window . . .|

```

12 pav. Rezultatai terminale (konsolėje).



13 pav. Rasti objektai - namas bei laikrodis.



14 pav. Rasti žmonės.



15 pav. Nuotrauka su iškirptu fonu (iškirptas dangus, tik baltame lape tai sunkiai matosi).