



Monitoring Armenian IT Industry

Specification Doc

15.12.2018

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Used technologies and frameworks

- **Background services**

- Windows NT service for github information scrapping
- Windows NT service for linkedin information scrapping
- Windows NT service for proxy scrapping

- **Desktop applications**

- WPF application for manually github profile scrapping
- WPF application for manually linkedin profile scrapping

- **Data access layer**

- MSSQL database
- Entity Framework Core 2.2 (last version)
- Repository pattern

- **Business logic layer**

- Common lib for all models used .NET Standart 2.0
- Repository pattern

- **Web API**

- ASP NET Core 2.2 (last version)

- **Technologies and libraries**

- ASP NET Core 2.2 (last version)
- EF Core 2.2 (last version)
- .NET Standart 2.0
- .NET Framework 4.7
- Selenium web driver
- nLog (last version)
- WPF
- HTMLAgilityPack
- Remotion.LINQ

- **Source code** - <https://github.com/VanHakobyan/MonitoringArmenianITIndustry>

- **Documentation** - <https://github.com/VanHakobyan/MonitoringArmenianITIndustry/blob/master/MonitoringIT.pdf>

Web API

GitHubs

- **Get (returns all GitHub users info from database)**
 - Request - /api/github
 - Response
- **Get By Id (returns specific profile and repositories of that GitHub profile by id)**
 - Request - /api/github/{id}
 - Response
- **Get by username (returns specific profile and repositories of that GitHub profile by username)**
 - Request - api/github/user/{username}
 - Response

Linkedins

- **Get (returns all LinkedIn profiles from database)**
 - Request - /api/linkedin
 - Response
- **Get By Id (returns specific LinkedIn profile by id)**
 - Request - /api/linkedin/{id}
 - Response
- **Get By username (returns specific LinkedIn profile by username)**
 - Request - /api/linkedin/user/{username}
 - Response

1 Github

1.1 Get

Get all github profiles from database

Request

Method	URL
Get	/api/github

Response

Status	Response
200 OK	<p>An array of github profiles</p> <pre>[{ "Id": 2, "UserName": "arthur-ghazaryan", "Url": "https://github.com/arthur-ghazaryan", "Company": null, "Name": "Arthur Ghazaryan", "Bio": null, "Location": "Armenia", "Email": "arthur.k.ghazaryan@gmail.com", "BlogOrWebsite": null, "StarsCount": 3, "ImageUrl": "https://avatars1.githubusercontent.com/u/13848410?s=460& p;v=4", "Repositories": [] }, { "Id": 10, "UserName": "sirak92", "Url": "https://github.com/sirak92", "Company": null, "Name": "Sirak Ghazaryan", "Bio": "I am a software engineer experienced in designing and developing readable, maintainable and testable software for large and complex systems.", "Location": "Armenia, Yeravan", "Email": "sirakghazaryan@gmail.com", "BlogOrWebsite": "https://www.linkedin.com/in/sirak- ghazaryan/", "StarsCount": 4, "ImageUrl": "https://avatars0.githubusercontent.com/u/12816615?s=460& p;v=4", "Repositories": [] } { "Id": 46, "UserName": "anahit42", "Url": "https://github.com/anahit42", "Company": null, "Name": "Anahit Vardanyan", "Bio": "Free software enthusiast ✨ \r\n\r\nLove teaching 📖", "Location": "Yerevan, Armenia", "Email": "vardanian.anahit@gmail.com", "BlogOrWebsite": null, "StarsCount": 4, "ImageUrl": }]</pre>

	<pre>"https://avatars1.githubusercontent.com/u/7938403?s=460&v=4", "Repositories": [] }]</pre>

1.2 GetByld

Get specific github profile by Id

Request

Method	URL
Get	/api/github/{id}

Parameters

Type	Param name	Values
URL_PARAM	id	1106

Response

Status	Response
200 OK	<p>Full contact and array of repositories list of that profile</p> <pre>{ "Id": 1106, "UserName": "VanHakobyan", "Url": "https://github.com/VanHakobyan", "Company": "@MonsterBit-Org", "Name": "Vanik Hakobyan", "Bio": ".NET Software Developer", "Location": "Armenia, Yerevan", "Email": "vanhakobyan1996@gmail.com", "BlogOrWebsite": "https://www.linkedin.com/in/vanikhakobyan", "StarsCount": 55, "ImageUrl": "https://avatars2.githubusercontent.com/u/23220521?s=460&v=4", "Repositories": [{ "Id": 6166,</pre>

	<pre> "Url": "https://github.com/VanHakobyan/ISTC_Coding_School", "Name": "ISTC_Coding_School", "CommitCount": 14, "BranchCount": 1, "Readme": ... "ProfileId": 1106, "StarsCount": 8, "ContributorsCount": 1, "ForksCount": 0, "Languages": [{ "Id": 12280, "Name": "C#", "Percent": 100.00, "RepositoryId": 6167 }], }, { "Id": 6168, "Url": "https://github.com/VanHakobyan/ProjectsGroup", "Name": "ProjectsGroup", "CommitCount": 120, "BranchCount": 1, ... } </pre>
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1.3 GetByUsername

Get specific github profile by username

Request

Method	URL
Get	/api/github/user/{username}

Parameters

From	Param name	Value
URL_PARAM	username	Heghine

Response

Status	Type	Response
200 OK	Profile	<p>Full contact and array of repositories list of that profile</p> <pre> { "Id": 296, "UserName": "Heghine", "Url": "https://github.com/Heghine", "Company": null, "Name": "Heghine Hakobyan", "Bio": null, "Location": "Yerevan, Armenia", "Email": null, "BlogOrWebsite": null, "StarsCount": 8, "ImageUrl": "https://avatars1.githubusercontent.com/u/1607253?s=460&v=4", "Repositories": [{ "Id": 1172, "Url": "https://github.com/Heghine/TestAndroidApp", "Name": "TestAndroidApp", "CommitCount": 4, "BranchCount": 0, ... }], "ProfileId": 296, "StarsCount": 0, "ContributorsCount": 1, "ForksCount": 0, "Languages": [{ "Id": 2178, "Name": "Java", "Percent": 100.00, "RepositoryId": 1173 }] } </pre> <p>...</p>

2 Linkedins

2.1 Get

Get all linkedin profiles from database

Request

Method	URL
Get	/api/linkedin

Response

Status	Response
200 OK	<p>An array of linkedin profiles</p> <pre>[{ "Id": 2, "Username": "anush-hakhverdyan-394bb4164", "FullName": "Anush Hakhverdyan", "Specialty": "Team Lead at PicsArt Inc.", "Location": "Armenia", "Education": null, "Company": "PicsArt Inc.", "ConnectionCount": 61, "Website": null, "Phone": null, "Email": null, "Birthday": null, "Connected": null, "ImageUrl": "https://media.licdn.com/dms/image/C4D03AQF86DpuFzm9AQ/profil e-displayphoto- shrink_800_800/0?e=1544659200&v=beta&t=Gud7W- yBQZtT1GMLvbHMa6LaFtSxtGRe_I5vJycXPKA&quot", "LinkedinEducation": [], "LinkedinExperience": [], "LinkedinInterest": [], "LinkedinLanguage": [], "LinkedinSkill": [] }, { "Id": 18, "Username": "lilith-muradian-668536150", "FullName": "Lilith Muradian", "Specialty": "Frontdesk coordinator at apolloBytes",</pre>

	<pre> "Location": "Armenia", "Education": "Yerevan State University...", "Company": "apolloBytes", "ConnectionCount": 55, "Website": null, "Phone": null, "Email": null, "BirthDay": null, "Connected": null, "ImageUrl": null, "LinkedinEducation": [], "LinkedinExperience": [], "LinkedinInterest": [], "LinkedinLanguage": [], "LinkedinSkill": [] }, { "Id": 94, "Username": "armliberty", "FullName": "Rafael Shahoyan", "Specialty": "Senior Software Engineer at Mentor Graphics", "Location": "Armenia", "Education": "National Polytechnic University of Armenia...", "Company": "Mentor Graphics", "ConnectionCount": 232, "Website": null, "Phone": null, "Email": null, "BirthDay": null, "Connected": null, "ImageUrl": "https://media.licdn.com/dms/image/C5603AQGQSSGzys7jlg/profile- displayphoto- shrink_800_800/0?e=1544659200&v=beta&t=eWSfWpXBICmjKfYFU ORlgh7Y5fHQ91eGxe56A0Q_ANI&quot", "LinkedinEducation": [], "LinkedinExperience": [], "LinkedinInterest": [], "LinkedinLanguage": [], "LinkedinSkill": [] }] </pre>
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2.2 GetByld

Get specific linkedin profile by Id

Request

Method	URL
Get	/api/linkedin/{id}

Parameters

Type	Param name	Values
URL_PARAM	id	3061

Response

Status	Response
200 OK	<p>Full linkedin profile and array of Education, Experiences, Interests, Languages and Skills of that profile</p> <pre>{ "Id": 3061, "Username": "aram-zhamkochyan", "FullName": "Aram Zhamkochyan", "Specialty": ".Net software engineer / C# developer", "Location": "Armenia", "Education": "Université de Poitiers...", "Company": "BetConstruct", "ConnectionCount": 0, "Website": "https://github.com/aramzham", "Phone": null, "Email": null, "Birthday": null, "Connected": null, "ImageUrl": null, "LinkedinEducation": [{ "Id": 3052, "Name": "Université de Poitiers", "Time": "2015 - 2016", "LinkedinProfileId": 3061, "Title": "Master 1 of Finance de marché et gestion de patrimoine" }, { "Id": 3053,</pre>

	<pre> "Name": "Yerevan State University", "Time": "2012 - 2014", "LinkedinProfileId": 3061, "Title": "Master's degree of International economic relations of 17.8" }, { "Id": 3054, "Name": "Yerevan State University", "Time": "2006 - 2010", "LinkedinProfileId": 3061, "Title": "Bachelor's degree of Theory of Economics" }], "LinkedinExperience": [{ "Id": 5264, "Company": null, "Title": "Title .Net software engineer", "Time": "Nov 2017 – Present", "LinkedinProfileId": 3061, "Location": "Yerevan" }, { "Id": 5265, "Company": null, "Title": "Title Junior C# developer", "Time": "Jul 2017 – Present", "LinkedinProfileId": 3061, "Location": null }, { "Id": 5266, "Company": null, "Title": "Title POS-terminal service division specialist", "Time": "Dec 2012 – Jun 2014", "LinkedinProfileId": 3061, "Location": null }, { "Id": 5267, "Company": null, "Title": "Title Processing Center Specialist", "Time": "Jul 2012 – Dec 2012", "LinkedinProfileId": 3061, "Location": null }, { "Id": 5268, "Company": "Armenian Card CJSC (ArCa)", "Title": "Call Center Operator", "Time": "May 2009 – May 2010", </pre>
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	<pre> "LinkedinProfileId": 3061, "Location": null }], "LinkedinInterest": [{ "Id": 7327, "Name": "Yerevan State University", "FollowersCount": 17157, "LinkedinProfileId": 3061 }, { "Id": 7328, "Name": "Mashable", "FollowersCount": 871998, "LinkedinProfileId": 3061 }, { "Id": 7329, "Name": "Microsoft", "FollowersCount": 5978911, "LinkedinProfileId": 3061 }, { "Id": 7330, "Name": "Jason Calacanis", "FollowersCount": 526257, "LinkedinProfileId": 3061 }, { "Id": 7331, "Name": "Université de Poitiers", "FollowersCount": 44224, "LinkedinProfileId": 3061 }, { "Id": 7332, "Name": "Business Insider", "FollowersCount": 5488575, "LinkedinProfileId": 3061 }], "LinkedinLanguage": [{ "Id": 4409, "Name": "jQuery Tutorial Course", "LinkedinProfileId": 3061 }, { "Id": 4410, "Name": "JavaScript Tutorial Course", "LinkedinProfileId": 3061 }] </pre>
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},
{
  "Id": 4411,
  "Name": "Python 3 Tutorial Course",
  "LinkedinProfileId": 3061
},
{
  "Id": 4412,
  "Name": "SQL Fundamentals",
  "LinkedinProfileId": 3061
},
{
  "Id": 4413,
  "Name": "SoloLearn C# Tutorial course completion",
  "LinkedinProfileId": 3061
},
{
  "Id": 4414,
  "Name": "English",
  "LinkedinProfileId": 3061
},
{
  "Id": 4415,
  "Name": "Français",
  "LinkedinProfileId": 3061
},
{
  "Id": 4416,
  "Name": "????????",
  "LinkedinProfileId": 3061
},
{
  "Id": 4417,
  "Name": "????????",
  "LinkedinProfileId": 3061
},
{
  "Id": 4418,
  "Name": "C# Level 1",
  "LinkedinProfileId": 3061
},
{
  "Id": 4419,
  "Name": "C# Level 2",
  "LinkedinProfileId": 3061
},
{
  "Id": 4420,
  "Name": "Fundamentals of Programming",
  "LinkedinProfileId": 3061
},
{

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	<pre>"Id": 4421, "Name": "My projects on GitHub", "LinkedinProfileId": 3061 }, { "Id": 4422, "Name": "TOEIC", "LinkedinProfileId": 3061 }], "LinkedinSkill": [{ "Id": 27522, "Name": "C#", "EndorsedCount": 14, "LinkedinProfileId": 3061 }, { "Id": 27523, "Name": "OOP", "EndorsedCount": 14, "LinkedinProfileId": 3061 }, { "Id": 27524, "Name": "Git", "EndorsedCount": 13, "LinkedinProfileId": 3061 }, { "Id": 27525, "Name": "LINQ", "EndorsedCount": 11, "LinkedinProfileId": 3061 }, { "Id": 27526, "Name": "Visual Studio", "EndorsedCount": 11, "LinkedinProfileId": 3061 }, { "Id": 27527, "Name": ".NET", "EndorsedCount": 11, "LinkedinProfileId": 3061 }]</pre>
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2.3 GetByUsername

Get specific linkedin profile by username

Request

Method	URL
Get	/api/linkedin/user/{username}

Parameters

From	Type	Value
URL	username	levon-hakobyan-007172a4

Response

Status	Type	Response
200 OK	LinkedinProfile	<p>Full linkedin profile and array of Education, Experiences, Interests, Languages and Skills of that profile</p> <pre>{ "Id": 2459, "Username": "levon-hakobyan-007172a4", "FullName": "Levon Hakobyan", "Specialty": "Frontend Developer at MicroBiz Cloud Point of Sale", "Location": "Armenia", "Education": "Yerevan State University...", "Company": "MicroBiz Cloud Point of Sale", "ConnectionCount": 0, "Website": null, "Phone": null, "Email": null, "Birthday": null, "Connected": null, "ImageUrl": null, "LinkedInEducation": [{ "Id": 2089, "Name": "Yerevan State University", "Time": "2007 - 2010", "LinkedInProfileId": 2459, "Title": "Master's Degree of Optics/Optical Sciences" }] }</pre>

		<pre> }, { "Id": 2090, "Name": "Yerevan State University", "Time": "2001 - 2005", "LinkedinProfileId": 2459, "Title": "Bachelor's Degree of physics" }, { "Id": 2091, "Name": "34 middle school", "Time": null, "LinkedinProfileId": 2459, "Title": null }], "LinkedinExperience": [{ "Id": 3537, "Company": "MicroBiz Cloud Point of Sale", "Title": "Frontend Developer", "Time": "2017 – Present", "LinkedinProfileId": 2459, "Location": "Yerevan" }, { "Id": 3538, "Company": null, "Title": "Title Project Manager", "Time": "Sep 2016 – Present", "LinkedinProfileId": 2459, "Location": "Yerevan" }, { "Id": 3539, "Company": null, "Title": "Title Technical Manager", "Time": "Dec 2013 – Present", "LinkedinProfileId": 2459, "Location": "Interactive World" },], "LinkedinInterest": [{ "Id": 4935, "Name": "Yerevan State University", "FollowersCount": 17154, "LinkedinProfileId": 2459 }, { "Id": 4936, "Name": "React Developers - Discuss ReactJS and </pre>
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		<pre> React Native", "FollowersCount": 0, "LinkedinProfileId": 2459 }, { "Id": 4937, "Name": "Unity Technologies", "FollowersCount": 77360, "LinkedinProfileId": 2459 }, { "Id": 4938, "Name": "Interactive World", "FollowersCount": 96, "LinkedinProfileId": 2459 }, { "Id": 4939, "Name": "Yii framework", "FollowersCount": 0, "LinkedinProfileId": 2459 }, { "Id": 4940, "Name": "Ginosi Apartels & Hotels", "FollowersCount": 1390, "LinkedinProfileId": 2459 }], "LinkedinLanguage": [], "LinkedinSkill": [{ "Id": 16703, "Name": "JavaScript", "EndorsedCount": 13, "LinkedinProfileId": 2459 }, { "Id": 16704, "Name": "PHP", "EndorsedCount": 9, "LinkedinProfileId": 2459 }, { "Id": 16705, "Name": "yii2", "EndorsedCount": 4, "LinkedinProfileId": 2459 }, { "Id": 16706, "Name": "Project Management", </pre>
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		<pre> "EndorsedCount": 6, "LinkedinProfileId": 2459 }, { "Id": 16707, "Name": "MySQL", "EndorsedCount": 10, "LinkedinProfileId": 2459 }, { "Id": 16708, "Name": "CSS", "EndorsedCount": 7, "LinkedinProfileId": 2459 }, { "Id": 16709, "Name": "jQuery", "EndorsedCount": 7, "LinkedinProfileId": 2459 }, { "Id": 16710, "Name": "AJAX", "EndorsedCount": 6, "LinkedinProfileId": 2459 }, { "Id": 16711, "Name": "React.js", "EndorsedCount": 5, "LinkedinProfileId": 2459 }, { "Id": 16712, "Name": "Yii", "EndorsedCount": 6, "LinkedinProfileId": 2459 }] } </pre>
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To be continued ...