

Course Exercise Report  
TLI 364 Semantic Web and Web Services  
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28.4.2013

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# 1 About the Exercise

First I wrote my Curriculum Vitae with XHTML language, then I markup it by using XML and finally I wrote the RDF description. Corresponding files are represented in the following chapters. XHTML and RDF files were successfully validated by the W3C validators [1, 4]. The files can also be found in the address `<URL: http://ww.cc.jyu.fi/~annauvi/semanttiset/>`. When writing the RDF file I used as an example [2] in the education, job experience and papers parts.

## 2 XHTML version of CV

```
<?xml version="1.0" encoding="ISO-8859-1"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
    "http://www.w3.org/TR/2000/REC-xhtml1-20000126/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" lang="fi">
<head>
    <title>Curriculum Vitae</title>
    <meta name="description" content="Curriculum vitae of Annemari Auvinen" />
    <meta name="keywords" content="Curriculum vitae, CV" />
    <meta name="author" content="Annemari Auvinen" />
    <link rev="Made" href="mailto:annauvi@cc.jyu.fi" />
    <link href="../tyyli.css" rel="stylesheet" type="text/css" />
</head>
<body>
    <h1>Curriculum Vitae</h1>
    <p>4.3.2005</p>
    <h2>Personal information</h2>
    <ul>
        <li>Last name: Auvinen</li>
        <li>First names: Annemari Kristiina</li>
        <li>Date and place of birth: 1.5.1977 Tampere</li>
        <li>Marital status: Single</li>
        <li>Address: Manttaalintie 6-8C9 40950 MUURAME</li>
        <li>E-mail: annauvi@cc.jyu.fi</li>
    </ul>
    <h2>Job experience</h2>
    <ul>
        <li>Postgraduate student
            <ul>
                <li>Comas graduate school, University of Jyväskylä</li>
                <li>1.10.2004- </li>
            </ul>
        </li>
        <li>Researcher
            <ul>
                <li>Agora Center, University of Jyväskylä</li>
                <li>1.1.2004-30.9.2004 </li>
            </ul>
        </li>
        <li>Research assistant
            <ul>
```

- <li>Agora Center, University of Jyväskylä</li>
  - <li>6.5.2002-31.12.2003</li>
- </li>
- <li>Trainee
  - <li>Sysline Oy</li>
  - <li>1.6.2001-31.8.2001</li>
- </li>
- <li>Operation controller (TAM 27)
  - <li>Metsä-Serla Tako Carton Plant Ltd, Quality Control Department</li>
  - <li>2.5.2000 - 31.8.2000</li>
- </li>
- <li>Part-time teacher
  - <li>Department of MIT, University of Jyväskylä</li>
  - <li>24.1.2000 -3.5.2002</li>
- </li>
- <li>Office trainee
  - <li>Valmet Oyj Kartonkikoneet</li>
  - <li>29.1.1997 - 15. 8. 1998</li>
- </li>
- <li>Cleaning lady
  - <li>Metsä-Serla Tako Carton Plant Ltd</li>
  - <li>1.6.1995 - 14.8.1995</li>
  - <li>2.5.1996 - 12.8.1996</li>
- </li>
- <li>Office assistant
  - <li>Tampereen Terästyö Oy</li>
  - <li>7.6.1993 - 6.8.1993</li>
  - <li>6.6.1994 - 5.8.1994</li>
- </li>

```

</ul>
<h2>Education</h2>
<ul>
  <li>Doctoral student, Department of MIT, University of Jyväskylä, 1.2.2004
  </li>
  <li>Master of Science, Department of MIT, University of Jyväskylä, 28.1.
    2004 </li>
  <li>High school graduate , Hatanpään lukio, 1.6.1996</li>
</ul>
<h2>Language</h2>
<ul>
  <li>Finnish: native</li>
  <li>Swedish: good</li>
  <li>English: good</li>
  <li>German: satisfying </li>
  <li>Russian: basics</li>
  <li>France: basics</li>
</ul>
<h2>Papers</h2>
<ul>
  <li>Vapa M., Kotilainen N., Auvinen A., Kainulainen H., Vuori J., Resource
    Discovery in P2P Networks Using Evolutionary Neural Networks, IEEE
    International Conference on Advances in Intelligent Systems & Theory
    and Applications (AISTA 2004), 15.-18.11.2004</li>
  <li>Vapa M., Auvinen A., Tawast T., Ivanchenko Y., Vuori J., Peer-to-Peer
    Resource Discovery Is a k-Steiner Minimum Tree Problem, 7 pages manuscript
    submitted to ACM SIGCOMM 2005 conference, February 2005</li>
  <li>Auvinen A., Vapa M., Weber M., Kotilainen N., Vuori J., Overtaking
    & Topology Management Algorithm for P2P Networks, 7 pages manuscript,
    December 2004</li>
  <li>Auvinen A., Vapa M., Weber M., Kotilainen N., Vuori J., Chedar: Peer-to-
    Peer Middleware, 8 pages manuscript, December 2004</li>
  <li>Nazarko S., Vapa M., Vuori J., Auvinen A., Decentralized Data Fusion in
    Peer-to-Peer Environment, 4 pages manuscript, January 2004</li>
  <li>Auvinen Annemari, Topology management algorithms in Chedar peer-to-peer
    platform, Master's Thesis, University of Jyväskylä, 27.1.2004.</li>
</ul>
</body>
</html>

```

### 3 XML version of CV

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<cv>
  <title>Curriculum Vitae</title>
  <date>4.3.2005</date>
  <section title="Personal information">
    <last_name>Auvinen</last_name>
    <first_names>Annemari Kristiina</first_names>
    <birth_date_and_place> 1.5.1977 Tampere</birth_date_and_place>
    <marital_status>Single</marital_status>
    <address>Manttaalintie 6-8C9 40950 MUURAME</address>
    <email>annauvi@cc.jyu.fi</email>
  </section>
  <section title="Job experience">
    <job>
      <position>Postgraduate student</position>
      <employer>Comas graduate school, University of Jyväskylä</employer>
      <time>1.10.2004- </time>
    </job>
    <job>
      <position>Researcher</position>
      <employer>Agora Center, University of Jyväskylä</employer>
      <time>1.1.2004-30.9.2004 </time>
    </job>
    <job>
      <position>Research assistant</position>
      <employer>Agora Center, University of Jyväskylä</employer>
      <time>6.5.2002-31.12.2003</time>
    </job>
    <job>
      <position>Trainee</position>
      <employer>Sysline Oy</employer>
      <time>1.6.2001-31.8.2001</time>
    </job>
    <job>
      <position>Operation controller (TAM 27)</position>
      <employer>Metsä-Serla Tako Carton Plant Ltd, Quality Control
      Department</employer>
      <time>2.5.2000 - 31.8.2000</time>
    </job>
    <job>
```

```

    <position>Part-time teacher</position>
    <employer>Department of MIT, University of Jyväskylä</employer>
    <time>24.1.2000 -3.5.2002</time>
</job>
<job>
    <position>Office trainee</position>
    <employer>Valmet Oyj Kartonkikoneet</employer>
    <time>29.1.1997 - 15. 8. 1998</time>
</job>
<job>
    <position>Cleaning lady</position>
    <employer>Metsä-Serla Tako Carton Plant Ltd</employer>
    <time>1.6.1995 - 14.8.1995</time>
    <time>2.5.1996 - 12.8.1996</time>
</job>
<job>
    <position>Office assistant </position>
    <employer>Tampereen Terästyö Oy</employer>
    <time>7.6.1993 - 6.8.1993</time>
    <time>6.6.1994 - 5.8.1994</time>
</job>
</section>
<section title="Education">
    <education>
        <degree>Doctoral student</degree>
        <institution>Department of MIT, University of Jyväskylä</institution>
        <date>1.2.2004- </date>
    </education>
    <education>
        <degree>Master of Science</degree>
        <institution>Department of MIT, University of Jyväskylä </institution>
        <date>28.1. 2004 </date>
    </education>
    <education>
        <degree>High school graduate</degree>
        <institution>Hatanpään lukio</institution>
        <date>1.6.1996</date>
    </education>
</section>
<section title="Language">
    <language>
        <name>Finnish </name>

```



```

        <skill>native</skill>
    </language>
    <language>
        <name>Swedish</name>
        <skill>good</skill>
    </language>
    <language>
        <name>English</name>
        <skill>good</skill>
    </language>
    <language>
        <name>German</name>
        <skill>satisfying </skill>
    </language>
    <language>
        <name>Russian</name>
        <skill>basics</skill>
    </language>
    <language>
        <name>France</name>
        <skill>basics</skill>
    </language>
</section>
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    <paper type="conference paper">
        <author>Vapa Mikko</author>
        <author>Kotilainen Niko</author>
        <author>Auvinen Annemari</author>
        <author>Kainulainen Heikki</author>
        <author>Vuori Jarkko</author>
        <title>Resource Discovery in P2P Networks Using Evolutionary Neural
        Networks</title>
        <state>accepted</state>
        <conference>IEEE International Conference on Advances in Intelligent
        Systems - Theory and Applications (AISTA 2004)</conference>
        <date>15.-18.11.2004</date>
    </paper>
    <paper type="conference paper">
        <author>Vapa Mikko</author>
        <author>Auvinen Annemari</author>
        <author>Tawast Tuukka</author>
        <author>Ivanchenko Y.</author>

```

```

    <author>Vuori Jarkko</author>
    <title>Peer-to-Peer Resource Discovery Is a k-Steiner Minimum Tree
    Problem</title>
    <state>submitted</state>
    <conference>ACM SIGCOMM 2005</conference>
    <date>February 2005</date>
</paper>
<paper type="manuscript">
    <author>Auvinen Annemari</author>
    <author>Vapa Mikko</author>
    <author>Weber M.</author>
    <author>Kotilainen Niko</author>
    <author>Vuori Jarkko</author>
    <title>Overtaking - Topology Management Algorithm for P2P
    Networks</title>
    <pages>7</pages>
    <date>December 2004</date>
</paper>
<paper type="manuscript">
    <author>Auvinen Annemari</author>
    <author>Vapa Mikko</author>
    <author>Weber M.</author>
    <author>Kotilainen Niko</author>
    <author>Vuori Jarkko</author>
    <title>Chedar: Peer-to-Peer Middleware</title>
    <pages>8</pages>
    <date>December 2004</date>
</paper>
<paper type="manuscript">
    <author>Nazarko S</author>
    <author>Vapa Mikko</author>
    <author>Vuori Jarkko</author>
    <author>Auvinen Annemari</author>
    <title>Decentralized Data Fusion in Peer-to-Peer Environment</title>
    <pages>4</pages>
    <date>January 2004</date>
</paper>
<paper type="master's thesis">
    <author>Auvinen Annemari</author>
    <title>Topology management algorithms in Chedar peer-to-peer
    platform</title>
    <organisation>University of Jyväskylä</organisation>

```

```
<date>27.1.2004</date>
</paper>
</section>
</cv>
```

## 4 RDF description of CV

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
xmlns:cv="http://www.cc.jyu.fi/~annauvi/cv.rdfs#">
<rdf:Description
rdf:about="http://www.cc.jyu.fi/~annauvi/semanttiset/Auvinen.xml">
  <cv:Updated>4.3.2005</cv:Updated>
  <cv:PersonalInformation rdf:resource="cv:PersonalInformation"/>
  <cv:JobExperience rdf:resource="cv:JobExperience"/>
  <cv:Education rdf:resource="cv:Education"/>
  <cv:LanguageSkills rdf:resource="cv:LanguageSkills"/>
  <cv:Papers rdf:resource="cv:Papers"/>
</rdf:Description>

<rdf:Description rdf:about="cv:PersonalInformation">
  <cv:LastName>Auvinen</cv:LastName>
  <cv:FirstNames>Annemari Kristiina</cv:FirstNames>
  <cv:BirthDate>1.5.1977</cv:BirthDate>
  <cv:BirthPlace>Tampere</cv:BirthPlace>
  <cv:MaritalStatus>Single</cv:MaritalStatus>
  <cv:Address>Manttaalintie 6-8C9 40950 MUURAME</cv:Address>
  <cv:Email>annauvi@cc.jyu.fi</cv:Email>
</rdf:Description>

<rdf:Description rdf:about="cv:JobExperience">
  <rdf:_1>
    <rdf:Description rdf:about="Job1">
      <cv:Position>Postgraduate student</cv:Position>
      <cv:Employer>Comas graduate school, University of Jyväskylä</cv:Employer>
      <cv:Time>1.10.2004- </cv:Time>
    </rdf:Description>
  </rdf:_1>
  <rdf:_2>
    <rdf:Description rdf:about="Job2">
      <cv:Position>Researcher</cv:Position>
      <cv:Employer>Agora Center, University of Jyväskylä</cv:Employer>
      <cv:Time>1.1.2004-30.9.2004 </cv:Time>
    </rdf:Description>
  </rdf:_2>
  <rdf:_3>
    <rdf:Description rdf:about="Job3">
```

```

        <cv:Position>Research assistant</cv:Position>
        <cv:Employer>Agora Center, University of Jyväskylä</cv:Employer>
        <cv:Time>6.5.2002-31.12.2003</cv:Time>
    </rdf:Description>
</rdf:_3>
<rdf:_4>
    <rdf:Description rdf:about="Job4">
        <cv:Position>Trainee</cv:Position>
        <cv:Employer>Sysline Oy</cv:Employer>
        <cv:Time>1.6.2001-31.8.2001</cv:Time>
    </rdf:Description>
</rdf:_4>
<rdf:_5>
    <rdf:Description rdf:about="Job5">
        <cv:Position>Operation controller (TAM 27)</cv:Position>
        <cv:Employer>Metsä-Serla Tako Carton Plant Ltd, Quality Control
        Department</cv:Employer>
        <cv:Time>2.5.2000 - 31.8.2000</cv:Time>
    </rdf:Description>
</rdf:_5>
<rdf:_6>
    <rdf:Description rdf:about="Job6">
        <cv:Position>Part-time teacher</cv:Position>
        <cv:Employer>Department of MIT, University of Jyväskylä</cv:Employer>
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    </rdf:Description>
</rdf:_6>
<rdf:_7>
    <rdf:Description rdf:about="Job7">
        <cv:Position>Office trainee</cv:Position>
        <cv:Employer>Valmet Oyj Kartonkikoneet</cv:Employer>
        <cv:Time>29.1.1997 - 15. 8. 1998</cv:Time>
    </rdf:Description>
</rdf:_7>
<rdf:_8>
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        <cv:Position>Cleaning lady</cv:Position>
        <cv:Employer>Metsä-Serla Tako Carton Plant Ltd</cv:Employer>
        <cv:Time>
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                <rdf:li>1.6.1995 - 14.8.1995</rdf:li>
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    </rdf:Description>
</rdf:_8>

```

```

        </rdf:Seq>
    </cv:Time>
</rdf:Description>
</rdf:_8>
<rdf:_9>
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        <cv:Employer>Tampereen Terästyö Oy</cv:Employer>
        <cv:Time>
            <rdf:Seq>
                <rdf:li>7.6.1993 - 6.8.1993</rdf:li>
                <rdf:li>6.6.1994 - 5.8.1994</rdf:li>
            </rdf:Seq>
        </cv:Time>
    </rdf:Description>
</rdf:_9>
</rdf:Description>

<rdf:Description rdf:about="Education">
    <rdf:_1>
        <rdf:Description rdf:about="Degree1">
            <cv:Degree>Doctoral student</cv:Degree>
            <cv:Institution>Department of MIT, University of
            Jyväskylä</cv:Institution>
            <cv:Date>1.2.2004- </cv:Date>
        </rdf:Description>
    </rdf:_1>
    <rdf:_2>
        <rdf:Description rdf:about="Degree2">
            <cv:Degree>Master of Science</cv:Degree>
            <cv:Institution>Department of MIT, University of Jyväskylä
            </cv:Institution>
            <cv:Date>28.1. 2004 </cv:Date>
        </rdf:Description>
    </rdf:_2>
    <rdf:_3>
        <rdf:Description rdf:about="Degree3">
            <cv:Degree>High school graduate</cv:Degree>
            <cv:Institution>Hatanpään lukio</cv:Institution>
            <cv:Date>1.6.1996</cv:Date>
        </rdf:Description>
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```

</rdf:Description>

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  </rdf:_1>
  <rdf:_2>
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      <cv:Level>good</cv:Level>
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  </rdf:_2>
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    </rdf:Description>
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  </rdf:_5>
  <rdf:_6>
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      <cv:Skill>basics</cv:Skill>
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<rdf:Description rdf:about="Papers">
  <rdf:_1>
    <rdf:Description rdf:about="Paper1">
      <cv:PaperType>conference paper</cv:PaperType>
      <cv:Author>
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```

```

        <rdf:li>Vapa Mikko</rdf:li>
        <rdf:li>Kotilainen Niko</rdf:li>
        <rdf:li>Auvinen Annemari</rdf:li>
        <rdf:li>Kainulainen Heikki</rdf:li>
        <rdf:li>Vuori Jarkko</rdf:li>
    </rdf:Seq>
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<cv>Title>Resource Discovery in P2P Networks Using Evolutionary Neural
Networks</cv>Title>
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<cv:Conference>IEEE International Conference on Advances in Intelligent
Systems - Theory and Applications (AISTA 2004)</cv:Conference>
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                <rdf:li>Tawast Tuukka</rdf:li>
                <rdf:li>Ivanchenko Y.</rdf:li>
                <rdf:li>Vuori Jarkko</rdf:li>
            </rdf:Seq>
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        <cv>Title>Peer-to-Peer Resource Discovery Is a k-Steiner Minimum Tree
Problem</cv>Title>
        <cv:State>submitted</cv:State>
        <cv:Conference>ACM SIGCOMM 2005</cv:Conference>
        <cv>Date>February 2005</cv>Date>
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        <cv:Author>
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                <rdf:li>Auvinen Annemari</rdf:li>
                <rdf:li>Vapa Mikko</rdf:li>
                <rdf:li>Weber M.</rdf:li>
            </rdf:Seq>
        </cv:Author>
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Problem</cv>Title>
        <cv:State>submitted</cv:State>
        <cv:Conference>ACM SIGCOMM 2005</cv:Conference>
        <cv>Date>February 2005</cv>Date>
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```

        <rdf:li>Kotilainen Niko</rdf:li>
        <rdf:li>Vuori Jarkko</rdf:li>
    </rdf:Seq>
</cv:Author>
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Networks</cv>Title>
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<cv>Date>December 2004</cv>Date>
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    <rdf:Description rdf:about="Paper4">
        <cv:PaperType>manuscript</cv:PaperType>
        <cv:Author>
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                <rdf:li>Vapa Mikko</rdf:li>
                <rdf:li>Weber M.</rdf:li>
                <rdf:li>Kotilainen Niko</rdf:li>
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        <cv>Date>December 2004</cv>Date>
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        <cv:Author>
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                <rdf:li>Vapa Mikko</rdf:li>
                <rdf:li>Vuori Jarkko</rdf:li>
                <rdf:li>Auvinen Annemari</rdf:li>
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        <cv>Title>Decentralized Data Fusion in Peer-to-Peer
Environment</cv>Title>
        <cv:Pages>4</cv:Pages>
        <cv>Date>January 2004</cv>Date>
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```

```

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    <cv:PaperType>master's thesis</cv:PaperType>
    <cv:Author>Auvinen Annemari</cv:Author>
    <cv:Title>Topology management algorithms in Chedar peer-to-peer
platform</cv:Title>
    <cv:Organisation>University of Jyväskylä</cv:Organisation>
    <cv:Date>27.1.2004</cv:Date>
  </rdf:Description>
</rdf:_6>
</rdf:Description>
</rdf:RDF>

```

## 5 Conclusions

For example some recruiting services in the Web might benefit from the RDF description of my CV. Application might work so that job seekers upload their RDF version of CV to the service. Employers can make queries to those RDF files by using application and search suitable persons for their demands. The search agent will go through the RDF files and find the matching CVs and report the results to the employer. This would require that all RDF descriptions of CVs use some defined RDF schema which my CV doesn't use at the moment.

## References

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