
David Mishelashvili

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[GO BACK](#)

Personal info

Birth date: 3 November 1978

Nationality: Georgian

Marital status: Single

Contact Info

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[GO TOP](#)

Education

Tbilisi State University (Faculty of Applied Mathematics and Computer Science): **2002 – present**

Postgraduate student. Working on Ph. D. thesis: Construction of software tools for Georgian Texts Processing.

Tbilisi State University (Faculty of Applied Mathematics and Computer Science): **2000-2002.**

Master in Computer Science

Master's Course, Speciality of Software Engineering. The course was finished with honors.

Tbilisi State University (Faculty of Applied Mathematics and Computer Science): **1996-2000.**

Bachelor in Computer Science

Bachelor's Course, Speciality of Software Engineering. The course was finished with honors.

Tbilisi Secondary School №67: 1985-1996.

Awards received

National Programming Contest of Georgia (Awarded by the National Department of Informatization)

Date	Type	Place	Award
2000 - Summer	Team Competition *	1-2	1 st class diploma
2000 - Autumn	Team Competition *	2-3	3 rd class diploma
2001 - Summer	Team Competition *	2	2 nd class diploma

* - Member of the Tbilisi State University Team

Certificates

Brainbench certified C programmer.

Brainbench certified Delphi programmer.

Languages

English	Fluent
Russian	Fluent
Georgian	Native

Personal

I have tendency to scientific work, with strong the oretical background and analytical mind.

Self-motivated, able to work under pressure and to tight deadlines, both on own initiative and in a team. Ready to accept job, which will require full use of my knowledge and skills, and allow further professional growth.

Summary

Postgraduate student at Tbilisi State University, faculty of Applied Mathematics and Computer Science. Working on Ph. D. thesis: **Software Systems for Georgian Texts Processing**.

Working as a laboratory assistant in the System Programming Department of the Vekua Scientific Institute of Applied Mathematics. Developed various software tools for Natural Language Processing. Have strong theoretical background in formal grammar theory (**finite state automata, context free grammars, LL(k), attribute grammars with feature constraints and unification**). Familiar with **Lex/Flex, Yacc/Bison** and **Coco/R** lexer and parser generator tools. Also have done prior work in university on **OCR (Optical Character Recognition)** systems. Have built the template driven OCR.

Programming for **UNIX-like** operating systems (**FreeBSD, Linux**) in **C** and **C++** programming languages (Real time billing, **TCP/IP** network applications, system utilities). Applications and Applets in **Java** programming language. Designed and implemented **CGI** scripts for web-sites in **Perl** and **Python**. Extensive experience with Open Source Database Systems (**MySQL, PostgreSQL**) and **SQL** language. Have successfully used **CORBA** distributed technology in several projects (with **omniORB** and **VisiBroker** – Object Request Brokers). Have experience with mobile software development under the **Symbian OS 6.1/7.0** for **Nokia Series 60** and **UIQ** smartphones. Co-founder of the new company that develops mobile software for Symbian OS (<http://www.killermobile.com>).

Key Projects (visit some of them online)

Scientific:

Morphological Analyzer of Natural Language. General purpose morphological analyzer, which implements a set of unique algorithms that make morphological analysis and grammar rule composition extremely flexible. Implements the new formalism for writing morphological rules. Based on feature structures and feature constraints method.

Syntactic Analyzer of Natural Language. The Syntactic parser that implements bottom-up parsing of context free grammar that is extended with feature structures and feature constraints. The parser introduces the new formalisms for grammar and lexicon file that are more robust and flexible than solutions offered in other existing systems. The system is written in standard **C++** programming language with **STL** (Standard Template Library), primarily for **Unix**, and ported also to **Win32** platform.

Industry:

WWW.POSTA.GE – Free Georgian Web-Mail Server. The most popular web-mail service in Georgia. Entirely written in **Perl**. Based on **PostgreSQL** Database System and running under **Linux** operating system. Currently we have redesigned the system under the **CORBA** framework. The client part is done in **Python**, and the server has been implemented in **C++**

CARD.SANET.GE – SaNet’s Rechargeable Internet-Card System. Real-time **RADIUS** billing system plus interactive payment system based on **magnetic cards** and **POS** (Point Of Service) Terminals. The whole system is implemented in **C++** under **FreeBSD** operating system. RDBMS is **MySQL** with its C++ API (**MySQL++**).

[GO TOP](#)

Publications

1. J. Antidze, D. Mishelashvili. Morphological Analyzer of Natural Languages, Conference on Natural Language Processing, The Georgian Language and Computer Technologies, Institute of Linguistics of Georgian Academy of Sciences, 21-23 June 2004, Tbilisi, Georgia.
2. J. Antidze, D. Melikishvili, D. Mishelashvili. Computer Morphology of The Georgian Language, Conference on Natural Language Processing, The Georgian Language and Computer Technologies, Institute of Linguistics of Georgian Academy of Sciences, 21-23 June 2004, Tbilisi, Georgia.
3. J. Antidze, D. Mishelashvili. Instrumental Tool for Computer Morphological Analysis of some Natural Languages, Reports of Enlarged session of the seminar of IAM TSU, vol. 19, 2004 (to be appear).
4. J. Antidze, D. Mishelashvili. Recognition of Georgian Wordforms and their Morphological Categories by Computer, Reports of Enlarged session of the seminar of IAM TSU, vol. 19, 2004 (to be appear).
5. J. Antidze, D. Mishelashvili. Instrumental tools for Georgian Texts computer analysis, Symposium on Georgian texts computer processing, Institute of Linguistics of Georgian Academy of Sciences, 16-19 June 2003, Tbilisi.
6. J. Antidze, N. Gulua, D. Mishelashvili. Syntactical Analysis of Georgian Texts, Fourth International Tbilisi Symposium: Language, Logic and Computation, Georgia, 2001.
7. J. Antidze, N. Gulua, D. Mishelashvili. Syntactical and Semantic Analysis of Georgian Texts, Georgian Mathematicians Congress, Tbilisi, 2001.

Summary of technical skills

Hardware	Intel 80/86 architecture. ARM RISC processors.	
Programming Languages	C, C++, Perl, Python, Java, Object Pascal, 80/86 Assembler (MASM, TASM)	
Operating Systems	FreeBSD, Linux , Microsoft Windows NT (2000, XP) , Symbian OS 6.1/7.0	
Compilers and Tools	GNU family of compilers (gcc, g++, gcj), Microsoft Visual Studio (VC++ 6.0), Borland Delphi 3.0-5.0 (Databases, OLE/ActiveX, Component Writing, Socket Programming, WinAPI), Sun Microsystems JDK 1.1.2 , Borland Jbuilder 2.0 (Applets – Applications, AWT package), FreePascal Compiler (FPC) for Linux, Macro Assembler, Turbo Assembler. Debuggers – gdb , Turbo Debugger, NuMega Soft Ice. Profilers: gprof , Turbo Profiler. Parser Generators: Lex/Yacc (bison) , Coco/R .	
	C / C++	Perl / Python
	UNIX/POSIX	MS Windows
	pthread package –POSIX threads (locking, mutexes, semaphores). IPC - (Inter Process Communication) pipes, shared memory, messages. Berkeley sockets API (TCP/IP, UNIX sockets), BDB – Berkeley database API (both C/C++), ncurses , readline . MySQL C API , MySQL++ . Cgicc .	WinAPI, OLE/ActiveX – basic interfaces. WinSock 2.0 – Windows sockets API. TAPI 2.0/3.0 – Telephony Application Programming Interface.
Text Editors	Emacs, Vi, Yudit (Unicode text editor)	
Advanced Technologies	RPC (for UNIX), CORBA (omniORB, ORBit, VisiBroker), COM/OLE/ActiveX, DCOM, ISO8583 Bank Card Originated Messages parsing and processing	
Unix Programs and Tools	Shells: bash, csh . Mail/Ftp/WWW: sendmail (<i>source level</i>), Apache Web-Server (<i>source level</i>) – suexec, mod_perl, mod_python, wu-ftp (<i>source level</i>). RADIUS: icradius (<i>source level</i>). DataBases: MySQL, PostgreSQL , General: grep, sed, awk ...	

[GO TOP](#)