
Personal data

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| Birth day | February 14, 1984 |
| Nationality | Peruvian |

Research themes

I have just finished my undergraduate courses in Computer Science. At the moment, I am working in the recovery of information from a database through Spoken Natural Language to help blind users to interact with computer in an Ergonomic way. The word recognition is carried out through phonemes recognition. This approach, allowed me to remake up words based on phonemes as it was using an unlimited dictionary. Besides, this system uses an Intelligent Hybrid System based on a SOM Neural Network that carries out their learning by optimizing the search on the error surface through Genetic Algorithms, this approach was interesting because allow us to reduce drastically learning times. In these days, I have received the acceptance letter to exhibit this project in the IEEE Symposium on Computational Intelligence in Image and Signal Processing which will be held April 1-5, 2007 in Hawaii, USA and the Fourth International Symposium on Neural Networks will be held June 3-7, 2007 in Nanjing, China. Furthermore, in these last years, I have been investigating the following concepts:

Biologically inspired models to create novel architectures.

- A Biologically Motivated Computational Architecture Inspired in the Human Immunological System to Quantify Abnormal Behaviours to Detect Presence of Intruders. **19th IFIP World Computer Congress**, IFIP International Conference on Biologically Inspired Cooperative Computing - BICC 2006. International Federation for Information Processing and Chilean Computer Science Society. Santiago, Chile.
- Artificial Immune Systems: A Novel Paradigm to build architectures. V Peruvian Journals of Computer Science – JPC 2006. Pags 261-270. Peruvian Computer Science Society. Arequipa, Peru.

People identification based on behaviors, software metrics and data mining techniques to create a intruder detection system.

- Quantifying the presence of intruders through software metrics by means of a model based on the Human Immunologic System. 5th Ibero-American Journal of Software Engineering and Knowledge Engineering JIISIC. Pags 77-84. ISBN: 970-94770-0-5. Autonomous Popular university of the State of Puebla – UPAEP. Puebla, Mexico. Bibsource: DBLP, <http://dblp.uni-trier.de/rec/bibtex/conf/jiisic/Choque06>
- Quantifying the presence of intruders on a system by using a framework based on the Human Immunologic System and data mining. I Peruvian Workshop of Software Engineering and Databases. Private University Antenor Orrego – UPAO. Trujillo, Peru

People identification based on a scalable fingerprint recognition and image enhancement in the Frequency Domain.

- Recovery by similarity of shape of fingerprints by means of an indexation in metric space and image enhancement by using Fourier transform. XXXII Conference Latin American of Computer science – CLEI 2006. Chilean Computer Science Society. Santiago, Chile.

Fourier, Gabor and Wavelets transforms, image and voice processing, data mining and evolutionary neural nets.

- Voice2SQL: Hybrid Intelligent System for the recovery of information from databases by means of Spoken Natural Language. 2nd International IEEE Conference on Intelligent Information Hiding and Multimedia Signal Processing. Pasadena, California, USA.

In general, my areas of interest are related with Semantic Web, Object-oriented programming, Pattern Design, Data Mining, Natural Language, and Signals Processing.

Languages

- **Spanish:** Native.
- **English:** Good Fluent.
- **Portuguese:** Elementary. I can read and understand it.

Hobbies

- Photography, travel, song writing, soccer, and dance salsa or merengue.

Education

2001 - present time Undergraduate of the last cycle of Computer Science, National University of San Agustin at Arequipa, Peru.

Accomplishments

2006 Interview in *Diario El Pueblo* about *VOICE2SQL*, a software that helps to blind users to interact with their computer through the voice.

2006 Interview in *Hispano de Television*, channel 4, due to recognition for to be the only peruvian undergraduate student that exposed in the 19th IFIP World Computer Congress, which took place for the first time in a Latinamerican country, Chile.

2005 BEST PAPER in the IV Congress of Computer Science and Systems of South America, COISIS 2005, Peru.

2004 Scholarship holder of the Microsoft Certification Scholarship Program in Peru in a national competition to obtain the Microsoft Certified Systems Engineer Certification(MCSE: Security).

2001 Second place, entrance examination (2nd. in 3200). National University of San Agustin at Arequipa, Peru.

Publications

- June 2007 An improve to Human Computer Interaction through Spoken Natural Language. Fourth International Symposium on Neural Networks (ISNN 2007). Nanjing, China.
- June 2007 Using Spoken Natural Language to retrieve information from databases. **IEEE** Symposium on Computational Intelligence in Image and Signal Processing (CIISP 2007). Hawaii, USA.
- March 2007 Asteroid Exploration with Autonomic Systems, a Biologically-inspired approach based on the Immunological System. 4th IEEE Workshop on Engineering of Autonomic and Autonomous Systems (EASe 2007). Tucson, USA.
- Dec 2006 Voice2SQL: Hybrid Intelligent System for the recovery of information from databases by means of Spoken Natural Language. 2nd International **IEEE** Conference on Intelligent Information Hiding and Multimedia Signal Processing. Pasadena, California, USA.
- Ago 2006 A Biologically Motivated Computational Architecture Inspired in the Human Immunological System to Quantify Abnormal Behaviours to Detect Presence of Intruders. **19th IFIP World Computer Congress**, IFIP International Conference on Biologically Inspired Cooperative Computing - BICC 2006. International Federation for Information Processing and Chilean Computer Science Society. Santiago, Chile.
- Ago 2006 Recovery by similarity of shape of fingerprints by means of an indexation in metric space and image enhancement by using Fourier transform. XXXII Conference Latin American of Computer science – CLEI 2006. Chilean Computer Science Society. Santiago, Chile.
- Jun 2006 Artificial Immune Systems: A Novel Paradigm to build architectures. V Peruvian Journals of Computer Science – JPC 2006. Pags 261-270. Peruvian Computer Science Society. Arequipa, Peru.
- Jun 2006 Recovery by similarity of shape of fingerprints by means of an indexation in metric space and image enhancement by using Fourier transform. V Jornadas Peruanas de Computacion y I congreso internacional de iniciacion cientifica en computacion. Pags 32-41. Computer Science Society. Arequipa, Peru.
- Feb 2006 Quantifying the presence of intruders through software metrics by means of a model based on the Human Immunologic System. 5ta. Ibero-American Journal of Software Engineering and Knowledge Engineering JIISIC. Pags 77-84. ISBN: 970-94770-0-5. Autonomous Popular university of the State of Puebla – UPAEP. Puebla, Mexico. Bibsource: DBLP, <http://dblp.uni-trier.de/rec/bibtex/conf/jiisic/Choque06>
- Ago 2005 Quantifying the presence of intruders on a system by using a framework based on the Human Immunologic System and data mining. I Peruvian Workshop of Software Engineering and Databases. Private University Antenor Orrego – UPAO. Trujillo, Peru

Computer skills

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| OS: Linux, Windows | Administration: MS Windows Server 2003 |
| Programing: JAVA, C/C++ | Scripting: PHP, Shell |
| Scientific: Matlab, Octave | Typography: L ^A T _E X |
| Web design: XHTML, CSS, AJAX | Databases: PostgreSQL, MySQL |
| IDEs: Eclipse, MS Visual Studio | |