**AGREEMENT FOR CULTURAL, EDUCATIONAL,  
AND SCIENTIFIC COOPERATION   
BETWEEN**

**Apprentice Systems Inc.  
AND**

**SCUOLA SUPERIORE SANT'ANNA, ITALY**

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In accordance with a mutual desire to promote international cooperation between Apprentice Systems Inc. and the Scuola Superiore Sant'Anna, Pisa, Italy, both institutions join in the following memorandum of understanding for cultural, educational and scientific cooperation.

Both Institutions agree to cooperate in the fields of

developing argument mining tools and methods in legal texts

Both Institutions agree to identify further fields of cooperation involving a wider range of research and academic entities.

**ART. 1**

Within the designated fields of study both Institutions agree to the following general forms of cooperation:

* joint research activities, publications and library exchanges,
* exchange of invitations to scholars for lectures, talks, and sharing of experiences,
* exchange of invitations to scholars to participate in conferences, colloquia and symposia,
* exchange of information in fields of interest to both Institutions.
* Exchange of developed software and methods
* Co-development of software and methods

**ART. 2**

Themes of joint activities and the conditions for utilizing the results achieved and arrangements for specific visits, exchanges and other forms of cooperation will be negotiated for each specific case and in all cases shall be contingent on the availability of funding.

**ART. 3**

Both Institutions subscribe to the policy of equal opportunity and do not discriminate on the basis of race, color, sex, age, ethnicity, religion, disability, national origin, or sexual orientation. Apprentice Systems Inc. and the Scuola Superiore Sant’Anna shall abide by these principles in the administration of this agreement.

**ART. 4**

This agreement shall become effective upon the date of signature by the representatives of the Institutions and shall be reviewed for extension in five years. Proposed changes to the agreement must be submitted no later than three months prior to their introduction.

**Art. 5: INTELLECTUAL PROPERTY**

All data, technical and commercial information, technologies, software, procedures and routines belonging to ASI and SSSA and disclosed to the other Party in order to support the performance of the activities provided in this Agreement, shall remain under the exclusive property of their holders. The same shall be the case for data, technical and commercial information, technologies, software, procedures and routines belonging to third parties, but under the responsibility of the Parties involved in this Agreement prior to its execution.

All new outcomes (privileged or not) resulting from joint work under this Agreement, such as patents, methodologies, technical innovations, products or processes and know-how, shall be co-owned by ASI and SSSA with each Party owning 50% (fifty percent), unless otherwise agreed. For the duration of this Agreement ASI and .. SSSA commit to timely inform each other about these outcomes. Each party will have 30 days from this notification to propose a different ownership structure and distribution. Acceptance of the co-ownership per equal quota (fifty percent) is presumed once this period has elapsed. Depending on their nature, if the need arises, specific terms for the management of ASI-SSSA joint property shall be detailed through a separate Agreement, in accordance with the internal intellectual property regulations of SSSA.

Apprentice Systems is sharing with SSSA the software listed and described in Annex I, and, unless otherwise specified in writing, gives SSSA a nonexclusive license to use and modify this software within the scope of this agreement.

**Art. 6: CONFIDENTIALITY**

The PARTIES will keep confidential any information of whatever nature or form, that is disclosed in the course of the activities covered by this Agreement and that was marked as “confidential”.

Confidentiality obligations no longer apply if the confidential information:

i)      has become or becomes publicly available by means other than a breach of the recipient’s confidentiality obligations; or

ii)   the confidential information is communicated to the recipient without any obligation of confidentiality by a third party who is in lawful possession thereof and under no obligation of confidentiality; or

iii)  the confidential information was developed by the recipient completely independently of any such disclosure by the other Party; or

vi)    the confidential information was already known to the recipient prior to disclosure; or

vii)  the recipient is required to disclose the confidential information in order to comply with applicable laws or regulations or with a court or administrative order.

This commitment remains in force until the end of this Agreement or its termination and five (5) years after.

**Art. 7: PUBLICATIONS**

All publications arising from the activities under this Agreement which one Party intends to publish will be submitted to the other Party at least thirty (30) calendar days prior to publication to permit the other Party to review the publication to identify patentable subject matter and to identify any disclosure of Confidential Information. The non-publishing Party is entitled to request that its Confidential Information be deleted from any such publication or communication.

**Art. 8: USE OF PERSONAL DATA**

Each Party undertakes any personal data processing activities covered by this Agreement as data controller. In particular, if it is required, the Parties shall cooperate to assess data protection impacts and adopt organizational and technical measures to ensure compliance to specific obligations and applicable legal frameworks. Data Protection Officers, Ethical Committees and/or Legal Offices of the Parties might be involved in this process, if and as needed. The Parties agree to collect, store and, more generally, process data in compliance with the legal framework currently defined by EU Reg. 679/2016 General Data Protection Regulation. SSSA declares to have appointed a data protection officer (email: dpo@santannapisa.it). SSSA undertakes to provide Apprentice Systems with specific guidance on how to comply with the requirements of this article of the Agreement, and Apprentice Systems is entitled to rely upon that guidance in meeting its obligations under this Agreement.

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| …………………………………………………..……. | *SCUOLA SUPERIORE SANT’ANNA* |
| By \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | By \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Annex I**

Legal Apprentice Suite - Software Inventory

Apprentice Systems has developed a complete suite of software to support the markup and searching of documents, as well as the training and testing of machine-learning models, and the deployment of trained models to enrich documents. The primary domain is that of legal documents, but application is not limited to that domain.

The suite is built around a standard JSON document format, referred to as LS-JSON (“Legal Semantic JSON”), which has data structures representing Case Info, Sentences (including text, classification, and global identifiers), Paragraphs, Footnotes, Notes & Tags, Groupings (designed to capture such structures as arguments and associated evidence), Decision Trees, Enrichments (based on AI) and the original source text.

The following software is involved in the creation, editing, enrichment, searching and storage of an LS-JSON document. Anyone can freely use/consume that LS-JSON format, but the contents of each document is protected under the author's copyright.

Legal Apprentice Software Products are stored in GitHub private repos which contributors can access by receiving and accepting an invitation from an owner authorized by Apprentice Systems, Inc.

The suite includes:

1. LA-MPS: Legal Apprentice (Marker, Pad, Search)

- A browser-based client that is an integrated suite of applications for marking-up LS-JSON (Marker), managing note taking across all LS-JSON documents (Pad), and supporting fuzzy queries across LS-JSON content (Search).

- repo: LegalApprentice

2. LA Server -- Web Server Solution/API to support login/identification/authorization of users.

- The server also supports real-time synchronization and message passing between the LA-MPS components through the use of web sockets.

- repo: LoginService

3. LA TextToLS-JSON -- Tools to consume legal documents in their native format (HTML, PDF, DOC, TXT) and convert them to LS-JSON format.

- This is a collection of typescript/RegEX code and libraries designed to parse documents at the paragraph, sentence, word, and character levels into the components of the LS-JSON format defined above.

- repo: LATextToLS-JSON

4. LA SearchAPI -- RESTful API and web services designed to query LS-JSON documents

- This software leverages elasticsearch to index and store thousands of documents by a global sentence ID, paragraph ID and document ID, in order to allow intelligent query of the content. Every aspect of the document becomes queryable, including the user's notes and tags.

- Tools to load/update LS-JSON documents into elasticsearch in bulk or batch mode.

- repo: LASearchAPI

5. LA PredictAPI -- RESTful API and web services designed to support the delivery of AI predictive models that identify and classify elements of an LS-JSON document, promoting in-depth understanding of the content

- In legal documents, much of the content is structured to support the components of an argument or other reasoning structure. AI models can be designed to identify features that predict how the text fits into the legal argument being made. Sentences can be identified as to their category (e.g. Finding, Evidence, LegalRule, Citation), their polarity (for or against the plaintiff) and their strength in supporting the overall argument.

- AI models can be created by many different sources, however this library creates a standard for communication and integration between the LS-JSON and the rest of the Legal Apprentice Suite.

- repo: LAPredictAPI

6. LAAI Model -- Library of ongoing AI experiments/models addressing a wide range of techniques for making predictions

- The Suite contains some Python wrappers around TensorFlow to manage the training/ storage/delivery of Neural Net models for tools like LAPredict

- Most of this work is documented in white papers provided to the legal community

- repos: LAAI\_ModelTeach & LAAI\_ModelTeach\_Ruletree

Legal Apprentice Suite - Domain Specific Considerations

This suite of tools is designed to generically meet the needs of managing document and published legal cases through the ingestion, enrichment, markup, search and argument construction process. Although most documents will share these steps in common, concepts specific to the domain of reasoning and argumentation may need to be added. Special versions of LA Marker and LA TextToLS-JSON have been created where custom markup, sentence splitting and text extraction were added. Examples currently implemented include:

- Veteran PTSD Cases decided by the Board of Veterans’ Appeals (BVA)

- Antitrust Cases

- New York State Appellate Cases

*This list is only a current snapshot of what Apprentice Systems is providing. It will be updated as necessary when new capabilities are added.*