Yeajin Byun

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EDUCATION

Inha University   *Incheon, South Korea*

B.S. in Industrial Engineering & Software Convergence Engineering   *Mar 2017 - Feb 2023*
- GPA: 3.91 / 4.5

EXPERIENCE

POSTECH Institute of Artificial Intelligence   *Pohang, South Korea*

Researcher   *Dec 2023 -*
Intern   *Oct 2023 - Dec 2023*
Text-to-Timbre
- Referenced the txt2img model using Normalizing Flows and fully converted it into an architecture suitable for txt2spkemb tasks
- Improved speaker embedding module by replacing the LSTM layer with TDNN + self-attention to address concerns about gradient vanishing in long sequences
- Applied LoRA for efficient fine-tuning in the txt module, reducing parameters from 111M to 1.2M
- Enhanced multi-speaker support by replacing the speaker embedder in the speech synthesis model
- Optimized the data tagging process by simplifying a complex system into an intuitive structure and creating a guideline, resulting in the dataset expanding more than 5 times from 800.

Real Data   *Seoul, South Korea*

Researcher   *Jan 2021 - Jun 2021*
- Contributed to a big data analysis platform construction project at Shinhan Financial Investment Corporation
  - Converted a customer churn prediction model from SAS to Python
  - Developed a customer segmentation model using K-Means on transaction data for targeted marketing
  - Utilized AWS Sage Maker Studio platform

- Developed educational materials on ML modeling for Woori Card
  - Prepared a basic Python syntax guide.
  - Created and delivered Python machine learning training materials using Scikit-learn.

Intern   *Jul 2020 - Dec 2020*
- K-Data Data Voucher Support Project
  - Conducted web scraping to collect approximately 6.7 million news articles for NLP-based corporate bankruptcy prediction research, extracting bankruptcy-related keywords from the articles
  - Automated web scraping for company IPO data, developed a web scraper

Projects

Porotect *Sep 2023*
A protection Service Against Unauthorized AI Training

IPO Journey Crawler *Dec 2021*
A web crawler that collects IPO data & first day trading data and organizes them

Eye Flicker *Jan 2020*
A program that distinguishes whether the eyes are closed or open

INHA Group for Problem Solving *Mar 2019 - Dec 2019*
Movie Audience Prediction Project through Big Data
- Conducted a project with C&B Multiplex
- Constructed a web crawler to collect movie reviews

AWARDS

Top Award, POSCO Youth AI · Big Data Academy, 2023 *Pohang, South Korea*
Awarded for top of the results of the AI project.

Excellence Award, POSCO Youth AI · Big Data Academy, 2023 *Pohang, South Korea*
Awarded for excellence of in Individual performance.

Excellence Award, I-GPS Practical Problem Research Contest IT Convergence, 2019 *Incheon, South Korea*
Awarded for excellence of the results of the project.

EXTRA-CURRICULAR ACTIVITIES

Gueltto *South Korea*
Technical Blog Writing Group *Jul 2021 - May 2024*

Student Council of the Department *Inha University, Incheon, South Korea*
Treasurer *Jan 2019 - Dec 2019*
- Elected as a treasurer for the department
- Facilitated weekly council meetings with the president to listen to students' opinions and prepared welfare plans
- Devised and managed overall budget proposals
- Prepared for the student council budget audit

International Regional Studies Program *University of California, Riverside, USA*
Selected as one of 50 participants for the program *Jan 2020*

RIVS, Busking Club *Inha University, Incheon, South Korea*
Vocalist *2019*

Educational Volunteer Club for Children   *Inha University, Incheon, South Korea*

Head of Student Affairs Team   *Mar 2018 - Dec 2018*

- Made kids' dance for children and performed it with them on Children's Day

CERTIFICATES

Big Data Analysis Engineer   *Jul 2023*

Korea Data Agency

빅데이터분석기사 / 한국데이터산업진흥원

Information Processing Engineer   *Nov 2021*

Human Resources Development Service of Korea

정보처리기사 / 한국산업인력공단

SKILLS

Programming

Language: Python

Libraries: PyTorch, Pandas, numpy, Scikit-learn, MYSQL, request, BeautifulSoup, etc.

Communication Strategy